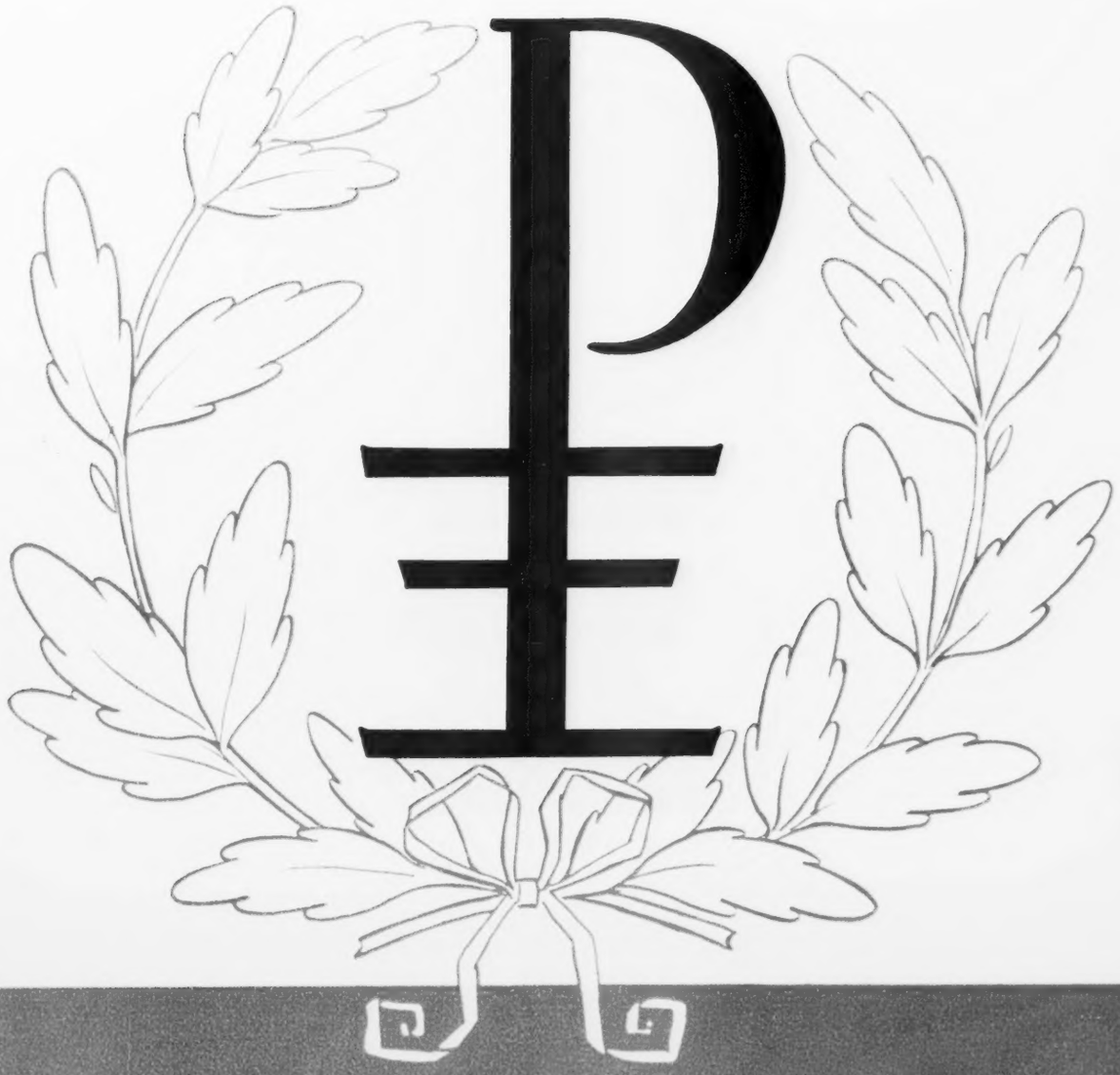
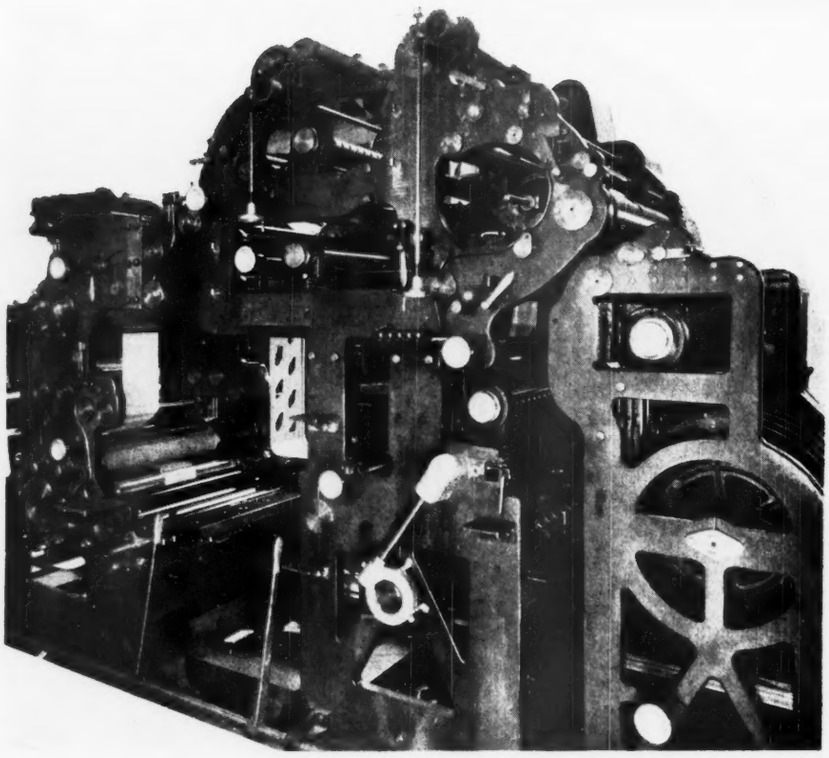


PRINTING EQUIPMENT ENGINEER

FEBRUARY • 1934

A Technical Publication for Mechanical Executives Responsible for Printing Production, Equipment and Supplies

SKF EQUIPPED
BUILT BY
WASHINGTON
MACHINERY
& SUPPLY CO.



SKF DEPENDABILITY WINS

ANOTHER SATISFIED CUSTOMER

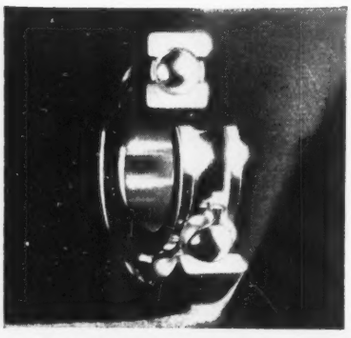
DEPENDABILITY . . . that's why The Washington Machinery & Supply Company specified SKF Ball Bearings when they built this press, "the last word," *after using SKF Bearings for about five years.*

There's 53 SKF Bearings on this 22" x 30" offset and printing press . . . in impression rolls . . . offset rolls . . . punches . . . numbering head . . . perforators . . . slitter . . . gluing attachment . . . deliveries . . . on a patented device, etc.

Years ago The Washington Machinery & Supply Company realized that from the very outset SKF has manufactured *up* to a definite standard of quality rather than *down* to a price . . . that their own customers were SKF fans, too.

Speed . . . durability . . . stamina . . . low cost of maintenance . . . infrequent lubrication . . . these are only a few of the qualities which sold SKF PERFORMANCE to the Washington Machinery & Supply Company . . . they should sell SKF Bearings to you.

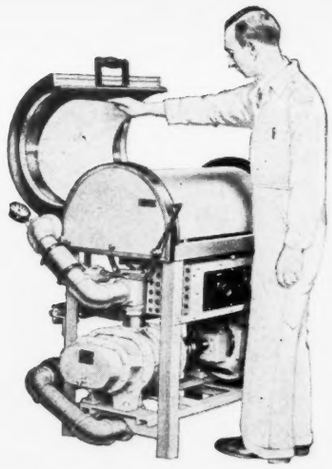
●You may buy a bearing as a bargain but try and get a bargain out of using it, for nothing is apt to cost so much as a bearing that cost so little



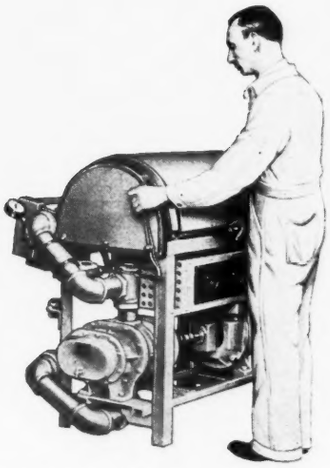
3162

SKF INDUSTRIES, INC., FRONT ST. and ERIE AVE., PHILADELPHIA, PA.

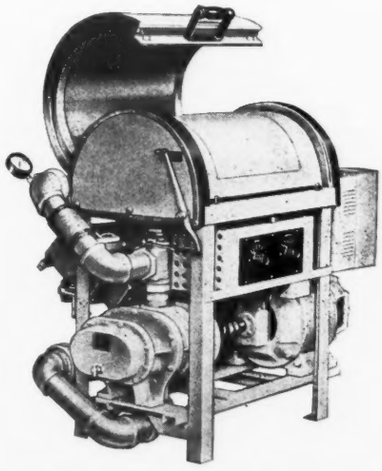
SKF
Ball and Roller Bearings



(1) Placing Dry-Mat in Vacuum Chamber.



(2) Closing Vacuum Chamber and applying residual vacuum.



(3) 50 seconds later, Vacuum Chamber opening, discharging mat to Base Heater—ready for Casting Units.

THE 1-2-3 OF AUTOFORMING

● The Stahi AUTOFORMER is as simple to operate as the 1 - 2 - 3 illustrations. It has even amazed the engineers who designed it.

● Stahi brings to you the biggest improvement in Dry-Mat Procedure ever accomplished . . . UNIFORM CASTING LEVELS . . . The Very Foundation of Quality Printing.

● Is it any wonder owners are saying—our printing has improved tremendously—and we give The AUTOFORMER credit for this.

● The AUTOFORMER turns out a consistent and uniform product—because of its AUTOMATIC OPERATION. Every Dry-Mat Electrically Scorched on both sides, at exactly the proper temperature, and at exactly the same timing.

● The AUTOFORMER has already PROVED its case — in many of the major newspapers in this and foreign countries —AUTOFORMING Dry-Mats means better printing — and lower production costs.

● If you investigate—you won't be disappointed.

STAHI NEWSPAPER SUPPLY COMPANY, Incorporated

1020 Crocker Street
Los Angeles, California

417 Oregonian Building
Portland, Oregon

AGENCIES

Goss Printing Press Co., of London,
European Manufacturers

Goss Printing Press Company
Chicago - New York

Toronto Type Foundry Co., Ltd.
Toronto - Winnipeg - Montreal

Wood Flong Corporation
Hoosick Falls, N. Y.

A. M. Carneiro & Co., South American Agents
New York, New York

RECENT ACHIEVEMENTS IN CLINE DEVELOPMENT

UNIT DRIVE FOR NEWSPAPER PRESSES

Power applied only where power is used • Eliminates shaft backlash • Insures perfect speed increase • Insures perfect speed decrease.

CORRELATED HIGH SPEED PRESS DRIVES, TENSION AND PASTER

Automatic electric control • Automatic electric tension • High Speed Paster, no complicated apparatus • Multiple pasters all rolls at one time.

STARTED CLINE CORRELATED SYSTEM, UNIT DRIVES, REELS AND ELECTRIC TENSIONS, ETC., IN

Cincinnati Times-Star

SOLD CLINE CORRELATED SYSTEM, UNIT DRIVES, REELS, ELECTRIC TENSIONS FOR PRESSES IN

Chicago Tribune
Los Angeles Times
St. Louis Star-Times
New York News

SOLD, including the above, over 100 reels in the United States. Sold, including the above and licensed in foreign countries, unit drives for 200 printing units and 50 folders (equivalent to 50 Octuple presses).

STARTED high speed pasters in two plants. Sold high speed pasters in three plants and demonstrated that multiple pasters can be made with our equipment.

CLINE-WESTINGHOUSE EQUIPMENT

CLINE SYSTEM — CLINE ELECTRIC MFG. CO. CHICAGO — QUALITY NAME SERVICE FAME — CLINE WESTINGHOUSE

NEW YORK, N. Y. | 111 W. Washington St., Chicago, Illinois | SAN FRANCISCO, CALIF.

Associate Member

National Printing Equipment Association, Inc.

Printing Equipment Engineer

Trade Mark Registered U. S. Patent Office

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Share Your Knowledge With Others

The key men in your organization will appreciate looking over the pages of this magazine. Perhaps one of them will be able to put some particular technical idea to good use.

Place a check mark in each square for attention of the department head or assistant whom you wish to look over special articles in this issue.

☐ *Production Manager*

☐ *Foreman Lithographing Department*

☐ *Mechanical Superintendent*

☐ *Superintendent Stereotype Foundry*

☐ *Composing Room Superintendent*

☐ *Superintendent Electrotype Department*

☐ *Superintendent Press Room*

☐ *Chief Composing Room Machinist*

☐ *Bindery Foreman*

☐ *Monotype Department*

☐ *Manager*

☐ *Photo Engraving Department*

☐ *Purchasing Agent*

His Fingers Might Learn to "See"

SENSITIVE fingers might be trained to "read" book titles. Perhaps they could learn to identify each large letter.

Likewise it may be possible for linecasting machine operators to teach their fingers to "read" the small reference characters on the backs of matrices. However, time and patience would not permit such procedure.

Operators who attempt to verify their assemblies of ordinary brass matrices are as handicapped as blindfolded persons who attempt to select books.

But it no longer is necessary to thus handicap operators—nor to waste 12% of their time in error correcting.

By having your matrices treated with the Black and White process—*making reference characters plainly visible in the assembler*—a significant portion of error expense can be prevented.

No guess work about this. We *guarantee* 25% reduction in all errors in original machine composition and *prove this saving* before you pay us a penny.

Matrix Contrast Corporation

Empire State Building New York City

(Sole licensees of the Percy L. Hill Black and White Patent No. 1466437, held valid by U. S. District Court, Eastern District of New York. Infringers will be vigorously prosecuted.)

PRINTING
EQUIPMENT
ENGINEER

February, 1934

The Printing Equipment Code

[EFFECTIVE FEBRUARY 18]

The Code of Fair Competition for the Printing Equipment Industry and Trade has been approved by the administrator at Washington and becomes effective February 18. Secretary James E. Bennet of the National Printing Equipment Association, Inc., informs us that there are less than 50,000 employees in the industry, and it is not required that the Code have the signature of the President in order to become operative.

SINCE publication of the full text of the then proposed Printing Equipment Industry Code in the September, 1933, ENGINEER, it has undergone considerable revision and has emerged finally, we hope, as a powerful instrument through which it will assist the printing industry itself to be led out of the quagmire to higher and drier ground. In fact, the application of the Printing Equipment Code together with the Code of Fair Competition for the Graphic Arts (which at this writing has not been approved) should go far to stabilize the printing industry.

For many years the cost-conscious printer has been struggling against an insurmountable condition. There has been great need for some moral agent by means of which influence the big and the litle printer could be reached alike. If this one thing can be accomplished through the instrumentality of both Codes their creation will have been justified amply.

The two Codes, like the two industries, are inseparably linked together. Neither the printer nor the equipment manufacturer can exist one without the other. Under the principle of self-determination the industry has reached a condition which has nearly impeded progress. Under new influence the industry can go ahead again—but in a cooperative spirit.

Without making recriminatory remarks intended for either side of the fence, we fell the Code intimates that after having exhausted productivity from a machine over a useful and just period of time, its owner has made his profits from it and should not expect an inordinate allowance when disposing of it in exchange for a newer productive unit. If he cannot continue to realize profits from its continued operation he should not expect anyone else to try to do so.

SOURCE OF VALUATION FOR USED MACHINERY

On this important subject of allowances for used or second-hand machinery or equipment acceptable as part payment for new machinery, it is an unfair practice to allow in excess of the value of the used equipment, such value to be determined according to the methods of value determination to be formulated by the Code authority, or if it so determines, by the executive committee of the National Printing Equipment Association, Inc., as the agency of the Code Authority, which action must also be approved finally by the Administrator. Pending approval by the Administrator or in the event of subsequent withdrawals or suspensions of approval, each member of the Industry and Trade may accept in trade used or second-hand machinery or equipment at such values as the member may determine from time to time.

PLAN FOR HANDLING USED MACHINERY

In Exhibit "A" of the Code which has been approved, is an outline of a plan submitted by the industry and trade to deal with the gigantic surplus used printing equipment problem. Participation by the members of the industry in this section will be voluntary. In the introduction it is stated that "The major portion of the available surplus used printing machinery and equipment rests in the hands of printers and publishers and other principals engaged in the Graphic Arts Industry . . . For the most part, such used machinery is offered for sale not through dealers but through other and various unorganized mediums. The lack of a central unorganized outlet for such used machinery unfavorably affects the entire Industry and Trade in many ways." If the plan achieves the desired results it will aid the Industry to stabilize employment, increase wages and enlarge purchasing power.

WILL ISSUE CERTIFICATES OF VALUE

For the purpose of providing an authenticated source for the disposition of all kinds of used machinery at fair and justifiable valuations, by acting as a negotiator between owners of used machinery and prospective purchasers through authorized dealers and otherwise, a Clearing Corporation will be organized. The plan comprehends issuance of Certificates of Value based on the valuation of the used equipment to be sold in full settlement for surplus used machinery. The disposition of the used equipment then rests with the Corporation.

Used machinery dealers may also dispose of used equipment

Continued on page 22

Rumford Press Production Control

Flexible System Has Been Worked Out so That Customer Changes May Be Made at Any Stage of Production

By FRANCIS A. WESTBROOK*

THE management of the Rumford Press, of Concord, N. H., has aimed at a very high degree of flexibility in laying out a scheme for the scheduling and control of production. This is necessary on account of the nature of its business which is almost entirely the printing of magazines for a large number of publishers. Last-minute changes are always being made by the publishers which must be taken care of promptly and efficiently. For this reason any formal, cast-iron routine is entirely out of the question and could not possibly be made to work. Many of the usual ways of controlling production are, of course, used but they have been modified to suit the particular business conditions of this company, and they are, therefore, interesting and suggestive of how other printers might be able to establish methods which will be helpful to them. To show how this is done at the Rumford Press a hypothetical case has been assumed and a set of forms correspondingly filled out.

The first thing that is done is to give the job a name and number and these are entered on page 1 of the "Master Sheet," shown in Fig. 1. The "Master Sheet" consists of a 4-page folder, each page 8½ in., by 11 in., white paper. The upper half of this page contains the general information needed by several of the departments. The lower halves of pages 1, 2 and 3 contain information for the composing room, the cylinder, rotary, web, job, color and press rooms and the bindery. These are the departments which need the general information and the fact that they are alloted the lower half of the page in each case will be apparent presently. Other instructions are given on pages 2, 3 and 4 which are reproduced in Figs. 2, 3 and 4, pages from the "Master Sheet."

Thus it will be seen that this "Master Sheet" contains all the information covering any given job. It is kept in the office of the Superintendent of Production. The instructions which are sent to the various departments involved in the completion of the job are made out on specification sheets, separately for each department. For instance the instructions sent to the composing room will look exactly like page 1 of the "Master Sheet." When the "Master Sheet" is being filled in by the typist, carbon paper is used, and the composing

*Mechanical Engineer, Brooklyn, New York.

MASTER SHEET

Customer **Plymouth Monthly** Job No. **5678**
Job **April issue** Promised **March 28**
Date **3/1** Not. Est. Customer's Order No. **567** Old Order No. Clerk **JM**

10,000 Starred Copies — Covers for Posters
40,000 Plain Copies — **500** Extra Covers
50,000 Total Edition — **50,500** Total Cover Run

Trim: xxxxxxxx / xxxxxxxx / xxxxxxxx / xxxxxxxx / xxxxxxxx
Paper Page Size: **8½ x 11** Inches
xxxxx / xxxxxxxx / Sidewired / xxxxxxxx

Imposition — Like sample **x** Office judgment ☐
Margins — Like sample **x** Office judgment ☐

STOCK
Text **35** x **45** — **70 A & T** — No. Pages **48**
Cover **23** x **35** — **100 West coated** — Front Ads. **16** pages
Adv. **35** x **45** — **70 Super** — Back Ads. **32** pages
Insert **35** x **45** — **80 Coated** — No. Pages **2**

Composing Room

COPY: xxxxxxxx / **1** Samples herewith **x** No **x** Yes / Prepare to previous issue **x** / xxxxxxxx / xxxxxxxx

PROOFS: **3** Galley wanted / **3** Pages wanted / **1** Lockup wanted / wanted / As Printed / Aut. proof ret'd with above? ☐No **x** Yes

TYPE: Office Judgment ☐ / BODY **10-21-12** / Inserts **8-21-10** / Footnotes / Tables — PICAS / WIDE

TYPE PAGE SIZE — Over all face measure, including folio or running head: **see sample**

Office Imprint: ☐ No **x** Yes
Where **Cover 2**
If periodical — Vol. **1** No. **1**
Starts page **1**
Run. hds.: ☐ No **x** Yes. Type **10 pt.**
EVEN pages **see sample** copy:
ODD pages: **see sample** copy:
Top folio: ☐ No **x** Yes. Center: **x** No ☐ Yes
Bottom folio: **x** No ☐ Yes Brackets: **x** No ☐ Yes
Rules under heads: **x** No ☐ Yes What kind
Front matter in numerals: **x** No ☐ Yes What kind
Begin each main head on a new page: ☐ No ☐ Yes
Halftones and next page following on a right-hand page: **x** No ☐ Yes
Signatures: ☐ No ☐ Yes
Dashes spaced: **x** No ☐ Yes
SPACING: **x** regular ☐ Close
HOLD TYPE? **x** No ☐ Yes
Job to be printed from
Type **x** Plates ☐
Spaces: **x** LOW ☐ HIGH

Fig. 1.—This is page one of the "Master Sheet," (filled in with a hypothetical job) and is used to schedule and control production in the plant of the Rumford Press, Concord, N. H. The "Master Sheet" consists of four pages, each 8½ in. by 11 in., printed on white bond paper. The other three pages are shown in Figs. 2, 3 and 4 respectively. The Superintendent of Production receives a copy of the "Master Sheet" from the office and compiles information for each mechanical department from it, retaining the original for his own use.

Memo of Items for Extra Charge

3 hours work on drawing

Cylinder, Rotary, Web, Job, Color, Press Room

INK: Put name of adv. opposite each cover

Cover I **4-color process**
Cover II **2-color Ward Co.**
Cover III **4-color Jones Inc.**
Cover IV **4-color Westwood Co.**
Text **Black**
Inserts **2 colors, red and black**

JOB PRESS: Figured to run on
Print pages Total pages in book Cut size of stock

ADDITIONAL INSTRUCTIONS:

Date **3-3** Signed

Fig. 2.—This is page two of the "Master Sheet," showing extra charges for the job, as well as instructions to the pressroom for the hypothetical case described in the accompanying article. The Superintendent of Production fills out a special form shown in Fig. 6 for the use of the pressroom from this page of the "Master Sheet."

Electrotype Department

Layout of Forms and Plates Made for Text, Covers and Inserts

16	Pages	x	up — Folios	**1-16**	for	**Cylinder**	Press as a	**16**	page form
16	Pages	x	up — Folios	**17-32**	for	"	Press as a	"	page form
16	Pages	x	up — Folios	**33-48**	for	"	Press as a	"	page form
16	Pages	x	up — Folios	**1-16**	for	"	Press as a	"	page form
16	Pages	x	up — Folios	**17-32**	for	"	Press as a	"	page form
16	Pages	x	up — Folios	**33-48**	for	"	Press as a	"	page form
2	Pages	**2**	up — Folios	**Insert**	for	"	Press as a	**2**	page form
	Pages		up — Folios		for		Press as a		page form
	Pages		up — Folios		for		Press as a		page form
	Pages		up — Folios		for		Press as a		page form
	Pages		up — Folios		for		Press as a		page form

Extras — Makeovers, Etc.

Bindery

INSERTS — Number, position, etc.

1 between pages 16 and 17

Date and Number Advance Copies, Extra Covers, Posters, To Be Shipped, and Any Special Instructions:

100 Inspected Copies
200 advance

Date **3-20** Signed .....

Fig. 3.—This is page three of the "Master Sheet," which contains instructions for the Electrotype and Bindery departments in the plant of the Rumford Press, Concord, N. H. The Superintendent of Production fills in on suitable forms this information and passes the special forms to these departments.

room instruction sheet is inserted in the typewriter with it so that both are filled in at the same time. The same thing is done while filling in the sheets for the bindery and the various press rooms. That is, the lower part of the forms for the composing room, the rotary, cylinder, web, job, color, pressrooms and bindery are the same as the lower parts of pages 1, 2 and 3 of the "Master Sheet" and the upper part of these forms is the same as the upper part of page 1 of the "Master Sheet." Clerical work is greatly reduced by the use of carbon paper made possible by such an arrangement. The shipping department does not need the information given in the upper half of the forms for the other departments. The same is true of the electrotype department. A buff paper duplicate, 8½ in. by 11 in., of the information shown in Fig. 4 from the "Master Sheet" is sent to the mailing and shipping department. The corresponding one for the bindery is shown in Fig. 5, which

Mailing and Shipping

Customer **Plymouth Monthly** ..... Job No. **5678** .....
Job **April Issue** ..... First Delivery **March 28** ..... Final Delivery **March 30** .....
Customer Order No. **567** ..... Clerk **JM** .....

10,000 Starred Copies ..... **2** Copyright copies to Treas. Office
40,000 Plain Copies ..... **500** Extra Covers
50,000 Total Edition Inserts **x** .....

100 Inspected copies on **Mar. 28** To **Plymouth Publishing Co., 123 Park St., Chicago** By **Exp.** **xxxxx** Paid
200 Inspected copies on **Mar. 29** To **Plymouth Publishing Co., 123 Park St., Chicago** By **Exp.** **xxxxx** Paid
500 **covers** Copies on **March** To **above** ..... **Exp. Paid** .....
.... Copies on ..... To ..... By ..... Collect Paid
.... Copies on ..... To ..... By ..... Collect Paid
.... Copies on ..... To ..... By ..... Collect Paid

Address **envelopes** Supplied. Mail here **2nd** Class.
Balance in storage **Yes**

ADDITIONAL INSTRUCTIONS:

Date **3-25** Signed .....

Fig. 4.—This is page four of the "Master Sheet" used in the plant of the Rumford Press, Concord, N. H. This form (as well as Figs. 1, 2 and 3) is filled in with details of a hypothetical printing case to show how the production control method operates. The Superintendent of Production fills in this information on a special form printed on buff paper, 8½ in. by 11 in., for the use of the mailing and shipping departments.

includes the general data from the upper half of page 1 of the "Master Sheet," shown in Fig. 1. This is printed on lemon-colored paper, 8½ in. by 11 in.

Fig. 6 shows the form made out covering the press work. This is printed on pink paper, 8½ in. by 11 in. In most cases this work goes to more than one of the press rooms and a form is made out for each such department which is involved. Under these circumstances the names of all the departments are scratched except the one to which the form is to go. In this instance the form is for the color department. This completes the instructions for each department for a given job.

The planning or scheduling of work and assigning it to the different machines is carried out by the Superintendent of Production with the cooperation of the foremen of each department. This is done on the basis of the superintendent's knowledge of what each machine will do, and is a personal accomplishment resulting from experience in this plant. There are two conferences with the foremen every day; one in the morning and one in the afternoon. The superintendent sees one foreman at a time, and the production of each ma-

BINDERY

Customer **Plymouth Monthly** ..... Job No. **5678** .....
Job **April issue** ..... Promised **March 28** .....
Date **3/1** ... Not. Est. Customer's Order No. **567** ... Old Order No. ..... Clerk **JM**

10,000 Starred Copies ..... Covers for Posters
40,000 Plain Copies ..... **500** Extra Covers
50,000 Total Edition ..... **50,500** Total Cover Run

Trim
xxxxxxxx
xxxxxxxx
xxxxxxxx
xxxxxxxx
xxxxxxxx

Paper Page Size:
8½ x 11 Inches

xxxxx
xxxxxxxx
Sidewired
xxxxxxxx

Imposition — Like sample **x** Office judgment ☐
Margins — Like sample **x** Office judgment ☐

STOCK						
Text	**35** x **45** — **70 A & T**	No. Pages	**48**	
Cover	**23** x **35** — **100 West coated**	Front Ads.	**16**	pages
Adv.	**35** x **45** — **70 Super**	Back Ads.	**32**	pages
Insert	**35** x **45** — **80 Coated**	No. Pages	**2**	

Bindery

INSERTS — Number, position, etc.

1 between pages 16 and 17

Date and Number Advance Copies, Extra Covers, Posters, To Be Shipped, and Any Special Instructions:

100 Inspected Copies
200 advance

Date **3-20** Signed .....

Fig. 5.—The original of this form is printed on lemon-colored paper, 8½ in. by 11 in., and is filled in by the Superintendent of Production at the Rumford Press, Concord, N. H. The information is compiled from a "Master Sheet" shown in Figs. 1, 2, 3 and 4. After the necessary details have been supplied this sheet is sent to the Bindery Foreman.

chine is planned for the day. In these conferences the superintendent has all the "Master Sheets" at hand which give him the necessary bird's-eye view of the manufacturing situation, as well as the details of each job. The former enables him to coordinate the work of all the departments and the latter to agree with the foremen on the work for each machine. At this point another form comes into play with reference to the press work. This is the "Daily Press Report," which carries a list of every press, by a number assigned to it, and is shown in Fig. 7. The sheet is 5¾ in. wide by 13¾ in. long, and is printed on white paper stock.

It will be noted that the machines are listed in groups, denoting different departments. Each foreman has a complete list but concerns himself only with the machines for which he is responsible. A multiplicity of forms is thus avoided. The superintendent, of course, has a complete list so that he knows exactly what is going on in each department. As the foreman and superintendent decide on what machine is to do the work they enter it on the sheet, and before coming to the conference the foreman enters the production during the preceding period in totals which show the conditions of

Cylinder, Rotary, Web, Job, Color, Press Room

Customer **Plymouth Monthly** Job No. **B 5678**
Job **April issue** Promised **March 28**
Date **3/1** Not. Est. Customer's Order No. **567** Old Order No. Clerk **JM**

10,000 Starred Copies — Covers for Posters
40,000 Plain Copies — **500** Extra Covers
50,000 Total Edition — **50,500** Total Cover Run

Trim: xxxxxxxx / xxxxxxxx / xxxxxxxx / xxxxxxxx / xxxxxxxx
Paper Page Size: **8½ x 11** Inches
xxxxx / xxxxxxxx Sidewired / xxxxxxxx

Imposition — Like sample **x** Office judgment ☐
Margins — Like sample **x** Office judgment ☐

STOCK								
	Text	**35**	x	**45**	**70 A & T**	No. Pages	**48**	
	Cover	**23**	x	**35**	**100 West coated**	Front Ads.	**16**	pages
	Adv.	**35**	x	**45**	**70 Super**	Back Ads.	**32**	pages
	Insert	**35**	x	**45**	**80 Coated**	No. Pages	**2**	

Cylinder, Rotary, Web, Job, Color, Press Room

INK:

Put name of adv. opposite each cover	Cover I	**4-color process**
	Cover II	**2-color Ward Co.**
	Cover III	**4-color Jones Inc.**
	Cover IV	**4-color Westwood Co**
	Text	**Black**
	Inserts	**2 colors red and black**

JOB PRESS: Figured to run on
Print pages Total pages in book Cut size of stock

ADDITIONAL INSTRUCTIONS:

Date Signed

Fig. 6.—The Superintendent of Production at the Rumford Press, Concord, N. H., after receiving the "Master Sheet" shown in Figs. 1, 2, 3 and 4, compiles information on this pink sheet (8½ in. by 11 in.) for the use of the Pressroom. All the details vital to the job which the foreman should know are set down on this sheet.

the job. There is thus a continuous record of the progress of every job, as will be plain from an inspection of Fig. 7.

The morning conference between the superintendent and the foremen is the most important, but the late afternoon conference is necessary because conditions change so rapidly in the plant. This is due to last-minute alterations and substitutions called for by the customers in advertising copy, and editorial contents which are particularly prevalent during these rapidly changing times. This naturally throws out the planning of the superintendent and the foremen and is the reason why a continual check-up is essential. The Rumford Press has no control over what its customers want and its job is to see to it that they are satisfied and that publication dates are met if in any way possible, in spite of changes. Consequently, it becomes the duty of the Production Superintendent to devise a way to meet conditions as they develop, which means that the planning procedure must be flexible. The

DAILY PRESS REPORT ..... 193..

Press No.	Total Impressions	On Press at 8 a.m. Today			
		Job No.	Name	Length of Run	Counter
1		13345	Hp cover	15000	M.R.
2		13493	P.P. cover	14400	M.R.
3	2900	13551	Arch. F. Cover	9700	2900
4		13313	EA. Cover	6450	M.R.
5	1950	13625	U.S. Law Cover	50000	1950
6	11700	13625	U.S. Law Cover	50000	11700
7	2650	13746	Bernat Folder	5000	2650
8		13563	F.M. Cover	5900	M.R.

Form broken here on account of space limitations

Fig. 7.—The original of this Daily Press Report is printed on thin white bond paper and is 5¾ in. wide by 13¾ in. long. Only one group of presses is shown here. The presses are grouped by sections (there are five sections on the blank shown) according to the kind of work done on them and are grouped in that way on this form. Each foreman is furnished this blank made out to show all the work in the pressroom but concerns himself only with the section for which he is responsible.

SUPPLEMENTARY INSTRUCTIONS

No. **5678**

Name **Plymouth Monthly**
Job **April issue**

From **JM** Date **3-15** 19

Additional corrections herewith for pages 3, 9, 17

To **comp. room** Time **9:18**
From
Instructions rec'd. Signed

Fig. 8.—This Supplementary Instruction blank is used to indicate changes which must be made in any job. This form is made out by the Order Department at the request of the customer and sent directly to the department concerned. This form is 5½ in. by 8½ in. and is printed on thin white stock.

twice-daily conferences provide for this very effectively. The afternoon conference is also important for planning the work to be done on the night shift.

Very closely associated with the planning work is the Order Department. It is actually a contact department between the company's customers and the operating departments. There is a group of persons in this department, each of whom takes care of a definite group of customers. When a change is wanted the customer gets in contact with the individual having charge of his work, either by telephone, telegraph or correspondence. The changes asked for which affect the production schedule are then taken up with the Superintendent of Production who sees to it that they are carried out in the proper department. In order that each individual may know the status of the jobs which he is looking after, the "Daily Press Report" is circulated around this office every morning.

When changes have to be made they are filled out on the "Supplementary Instructions" form shown in Fig. 8. This form is 5½ in. by 8½ in. and is printed on white onion skin stock. They are made out by the person in the Order Department whose customer asks for the change, and are sent directly to the department concerned.

SPECIAL SUPPLEMENTARY INSTRUCTIONS

No. **5678**

Name **Plymouth Monthly**
Job **April issue**

From **JM** Date **3-22** 19

Copy herewith:
Mayo 1-25

This article is to be substituted for the Jones article now on pages 8-17

2 sets of **xxxxxxx** page proofs and **1** hold set.

PROOF WANTED AT **9 p.m. today**

To **comp. room.** Time **9:50 a.m.**

Signed
Instructions rec'd. Signed

Fig. 9.—This form is printed on thin pink stock and is 5½ in. by 8½ in. in size. When properly filled out it has right-of-way over all previous instructions. This is made out in triplicate by the Order Department which retains a copy and sends the other two copies to the department concerned. The foreman receiving the two copies signs one and returns it to the person who made it out so the Order Department will know that action is being taken.

When an emergency arises, the change is filled in on a pink form (also 5½ in. by 8½ in., thin stock) called "Special Supplementary Instructions," and this has right-of-way over everything. It is shown in Fig. 9. Both of these sheets are made out in triplicate or more. One is kept by the Order Department and the others are sent to the department concerned. As soon as the foreman receives them he signs one and returns it to the person who sent it out so that he knows action is being taken. He then destroys the one he kept originally and files the one which has been signed by the foreman, thus having a complete check.

It has been the experience of this establishment that for its kind of work it is impossible to plan for the production departments more than forty-eight hours ahead, and this is by no means sure. It is for this reason that so high a degree of flexibility is necessary for uninterrupted production.

Becomes Assistant Manager

Walter B. Patterson, manager of the Chicago agency of the Mergenthaler Linotype Company, announces the promotion of Fred A. White, former sales manager of the agency, to assistant manager of the agency.

Mr. White, who began his printing apprenticeship with the Woodford Sun of Versailles, Ky., in 1900, is an all-round printer, and has served the graphic arts in many cities in the United States, Canada, and Central and South America. At various times and in various places he has filled the roles of

Fred A. White, Recently Appointed Assistant Manager, Chicago Agency, Mergenthaler Linotype Company.

expert linotype operator, machinist, layout man, typographer, and composing room executive.

When the United States entered the World War, Mr. White enlisted and served in the aviation branch of the navy.

In September, 1919, he became a salesman with the Linotype organization and for a year represented it in Kentucky, before being transferred to the northern Ohio territory, with headquarters in Cleveland. In October, 1930, he was called in from the road and made sales manager of the agency, a position he continued to fill until his latest promotion.

General Electric's Business On Upgrade

President Gerard Swope recently announced orders received by the General Electric Company during the year 1933 amounted to $142,770,791, compared with $121,725,772 for 1932, an increase of 17 per cent.

Orders for the quarter ended December 31, 1933, amounted to $37,985,790, compared with $27,351,658 for the last quarter of 1932, an increase of 39 per cent.

Sales billed and earning for the year 1933 are not yet available, but the complete annual report will be issued in March.

Composing Room Saw Maintenance

Continuation of Article Describing the Methods and Fixtures for Swaging and Filing Metal-Cutting Saws by Hand

By MAC SINCLAIR

In the January ENGINEER it was explained how a composing room metal-cutting saw performs its work. Some discussion for the proper sharpening of a saw blade was presented. This is the second and last installment.

IF THE swaging tool is held in such a position that either of the lips bears upon the face or heel of a saw tooth, one or the other of the swaging tool lips may crack off when the tool is struck with the hammer, as shown in Fig. 3. The ability to balance the tool upon the tip of each tooth without tilting the tool to one side or the other, comes with practice.

After all the teeth have been swaged the saw is ready to be filed. It may be placed between two circular wooden pieces of smaller diameter than the saw and clamped in the jaws of a bench vise; or the device shown in Fig. 4 may be employed to hold the saw. Clamping the saw blade tight helps the filing operation.

The cutting edge of the tooth should run on a radial line toward the center of the saw blade. It doesn't make much difference if the tooth line runs to the right of the arbor hole slightly or to the center so long as the

Fig. 3.—The swaging tool should be balanced on the tip of the tooth with the sides of the tool V-recess equally spaced in relation to the cutting face and heel of the tooth. See center figure above.

One of our machinist friends suggests that a ⅛-in hole be drilled through the swaging tool about ⅛ in. above the apex of the "V" slot in the tool. This, he asserts, will prevent any liability of either of the lips splitting off while using the tool.

teeth are of uniform shape. Filing the saw so that the cutting edges of the teeth run back to the left of center (when the saw is in position with the teeth facing the right) will "hook" the teeth so that a chopping effect will be noticed while the saw is cutting material.

Saw teeth which have been filed to an uneven height

will not cut freely, and there is always the danger present that the work (slugs or strip material) may be dragged from the work-holding vise on the saw table.

USE THE PROPER FILE

Where composing room saws are filed by hand, probably the best file to use (on saws having 50 or more teeth) is a 7-in. cut tooth tapered band-saw file. The term, "band saw" is used to distinguish the cutting corner of the file, which is blunt, from the corner of a regular slim taper file which has rather sharp cutting corners. The blunt corner teeth of a band saw file provide longer lasting cutting edges, both in the case of a file used in a machine and one used in hand-filing.

"Gumming" and "Jointing"

"Gumming" a saw means to clean off its sides by holding a stone or some abrasive cloth wrapped around a wooden block against the side of a saw while it is running. The sides of a saw blade will "gum" (collect metal) only when the swage of the teeth has completely disappeared. This condition ought not to be permitted to occur in any composing room.

"Jointing" a saw is used to express the operation of holding a stone of some kind against the tooth tips of a saw blade while it is running under power in order to cut down the long teeth and make them equi-distant from the center of the blade. Jointing is a necessary operation sometimes where saw blades are sharpened by hand as it is nearly impossible to keep the teeth of uniform height without occasional jointing. After a saw has been jointed, the teeth must be filed again to a point previous to swaging. If the tooth recess or gullet has been properly deepened, the saw tooth will be of a uniform shape and the tooth tip will be on a circumferential line with the other teeth.

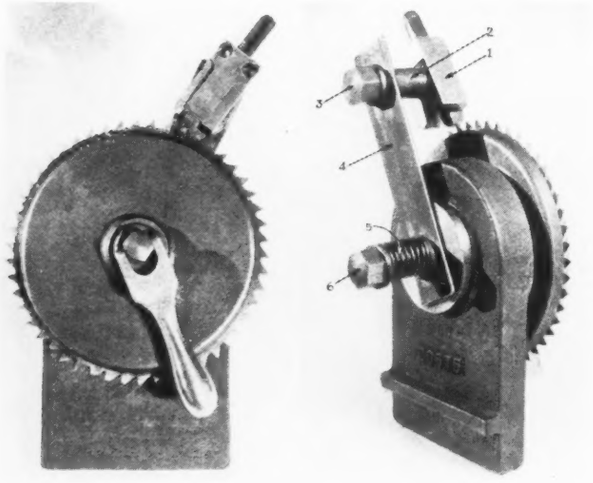

Fig. 4.—A combination swaging and hand-filing block. This block has interchangeable disks for 5 and 6-inch saws. When 6-inch saws have been reduced in diameter because of repeated filings, the smaller disk can be substituted for the larger one. The swaging tool holder attachment is an adaptation of the Sloan tool, a description of which was printed in the May, 1931, ENGINEER. *In this figure (4), 1 represents the swaging tool holder or block, 2 is the spacing collar interposed between the adjustable tool holder 1 and the clamping screw 3; 4 is movable arm pivoted on screw 6 and held under tension of spring 5. As the work of swaging the teeth proceeds, the swaging tool held in block 1 is moved from tooth to tooth. This tool was made by a composing room machinist for use in a plant. The idea is that any one of several machinists in the plant can swage a saw blade even though he is not proficient at balancing a swaging tool.*

FILING THE SAW

While dressing the teeth, keep the file in a straight-across position in relation to the saw. Bear in mind that the cutting face of each tooth is to run on a radial line toward the center of the saw, just like the spokes of a wheel. Dress each tooth a constant amount and continue rotating the blade clockwise as the filing proceeds until the dullness caused by the swaging tool has disappeared from the tip of each tooth. Always file the saw at the top-center portion of the blade. File a few teeth and rotate the blade enough after filing several teeth to bring the unfiled teeth to top-center position.

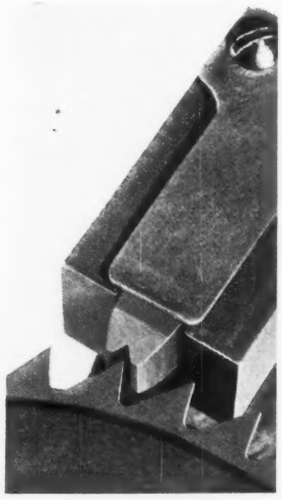

Fig. 5.—Detail illustration of the slotted swaging tool holder or block shown at 1 in Fig. 4. The tool is held in the slot under tension of phosphor bronze plate spring which is 0.031 in. thick.

Saw blades for composing room use are furnished by various companies which have, commonly, 64, 50 and 32 teeth. Probably there are more 50 and 32-tooth saws in use at present than the 64-tooth blades. Larger tooth saw blades cut the work more freely than the finer tooth blades so long as they are kept in good condition and offer less resistance as the work is pushed against them by the operator.

TAKING UP SPINDLE AND TABLE PLAY

Means for taking up end play in saw spindles is always provided by the saw manufacturer. The spindle should be tested occasionally for end play. This is required at indefinite intervals, according to the amount of daily work done on the saw. In order to cause the saw to do accurate work, the spindle should not be permitted to have end play. Likewise, the gib for the sliding work table can be adjusted to take out all side play from the table. Besides being the cause of inaccuracy, play in either spindle or table may cause accidents, either to the work or the operator's fingers.

SETTING TRIMMER KNIVES

To function properly, trimmer knives should have keen cutting edges. At the time of checking the trimmer knives for position it is best to adjust them so that they will just polish off the type metal which is being trimmed. Hardly any two printers advance the work

TRADE **LINOTYPE** MARK

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TEXT LINOTYPE RANGE

Linotype Bodoni Family

The "Engineer" is a Cooperative Publication

WHAT WE ARE DOING FOR OUR READERS:

Each month we see that the ENGINEER contains worthwhile technical information pertaining to the latest engineering developments in printing machinery and supplies, as well as production helps to achieve better quality and lower your costs.

WHAT OUR READERS CAN DO FOR US:

First of all, the ENGINEER is published for you. Here is how you can help make it bigger and better.

After you have read in this issue about Howard B. Mooney, Chief Composing Room Machinist of the Pittsburgh *Post-Gazette* perfecting a spaceband cleaning and polishing machine, and the invention of Ernest J. Smith, Stereotyping Superintendent of the Detroit *News*, as well as the very helpful device developed by E. S. Ebner, Superintendent Stereo-Pressroom, Gary (Ind.) *Post-Tribune*, perhaps you also would be willing to send us for publication a short story about some useful idea developed in your plant. It need not be typewritten.

And mention PRINTING EQUIPMENT ENGINEER when answering advertisements, writing manufacturers for information or when interviewing manufacturers or their representatives.

Mac Sinclair

Editor.

against a saw in the same manner. Some of them, mind intent on the work at hand, actually jab the work into the saw and past the trimming knives. Many of them approach the saw simply to cut off surplus metal which interferes with the completion of a job of composition. It is for these fellows that the knives should be set as far back from the work as possible in such a way as to remove a light shaving in order to smooth off the roughness of the saw cut. This will prevent trimmer knives from being forced back out of adjustment and the consequent violent throwing of slugs into the air.

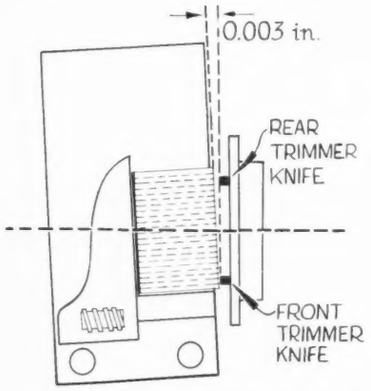

Fig. 6.—Diagram showing relation of composing room saw slide to cutting line of trimmer knives. The slide is mounted at a small angle to the axis of the saw spindle. The Miller saw was the first to carry this arrangement. After the saw has cut off the waste part of the work, the front trimmer smooths the roughness caused by the saw and finishes the work to the proper em or point length. Note that there should be approximately 0.003 in. between the rear trimmer knife and the work which has been trimmed by the front trimmer knife. This is to provide a safe clearance so the upwardly turning rear trimmer knife will not throw the trimmed metal into the air. A loosely adjusted saw slide may nullify this safety feature as well as being the cause of the saw doing inaccurate work.

TRIMMER-TABLE CLEARANCE

After the work has been pushed beyond the front or leading trimmer, and is brought to rest at a point opposite the rear trimmer, it should clear the rear trimmer knives about 0.003 in. When the work is in this position, the rear trimmer knives are revolving upwardly past the work. This is made possible by mounting the sliding table at a small angle to the axis of the saw spindle as shown in the diagram. Occasionally a saw table will "lose" this angle. Any good machinist can correct this condition, but he should first remove any play in the sliding work table or saw spindle.

BAND SAW FILING FIXTURE

We are indebted to James Dent, chief composing room machinist of the Cleveland *News*, for details about a fixture designed by W. L. Schweida, machinist apprentice, which is intended to support a Rouse band saw while it is being sharpened in a Wardwell saw-filing machine. Its construction is such that a dull band saw can be filed automatically just like circular saws.

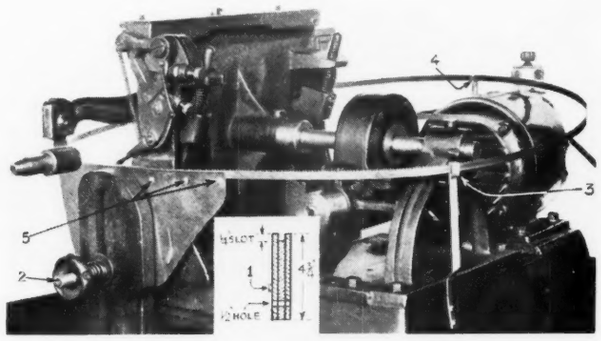

Fig. 7.—View of Rouse Band Saw mounted in suitable fixture on a Wardwell saw-filing machine in the plant of the Cleveland News.

The fixture is made from stereotyper's Russia iron casting box tail pieces which are 0.028 in. thick. The natural curvature of the pieces is retained as the arc seems to be suitable to permit feeding of the saw band by the pawl while it is being filed.

The fixture measures 11 in. across the top, as in a chord, (when in operating position like that shown in the photograph) and is 4¾ in. deep, measured from top to bottom at the central portion.

The fixture is constructed of three pieces of the iron. The front and back plates are alike, but the center piece measures 4½ in. from top to bottom so as to provide a slot in which to support the saw band. The pieces are riveted together along the top edge as indicated at 5. A ½-in. hole is drilled centrally in the guide approximately ½ in. from the bottom in order to slip the fixture over the work-holding vise arbor screw *2*. This means of support, together with the block *1*, (inset drawing) keeps the fixture rigidly in position. Two auxiliary saw support guides, *3* and *4*, made from ½-in. C. R. steel, are fastened to the machine frame.

Turning the tension nut on arbor screw *2* flexes the fixture in order to apply sufficient pressure so the guide will hold the saw band against movement as the feed pawl moves back after feeding one tooth for each cutting stroke of the file.

News of the Wood Autopaster

THE JERSEY CITY PRINTING COMPANY has ordered eight Wood Autopasters, to be attached to its Telephone Directory presses. By the addition of these Automatic, Full-Speed, Self-Splicing Devices the telephone directory presses of this concern may be run continuously at full speed throughout the whole working day. Thus may be saved the great wastage which now results from signatures badly folded, because of stoppages or slow-downs for paper replenishment.

The Autopaster not only saves printed waste but it insures accuracy in printing and folding by maintaining continuously a uniform speed of operation, and increases production by enabling a press to be run throughout its full working period at its full operable speed.

The money savings incident to improvement in manufacturing economies effected by the installation of Autopasters in this plant should be sufficient to retire quickly the investment involved.

THE AUTOPASTER EQUIPMENT of The New York Times, which has been in continuous operation feeding fast Wood Steel Printing Units for over a year, shows for the period of six months ending with December, 1933, an operating efficiency of 98.87%, as follows:

EFFICIENCY RECORD OF WOOD AUTOPASTERS

The New York Times

1933	Number of Rolls Spliced	Splices Made	Splices Lost	% Splices Made	% Splices Lost
July	1148	1137	11	99.0	1.0
August	1286	1277	9	99.3	.7
September	1219	1216	3	99.75	.25
October	1205	1187	18	98.5	1.5
November	1090	1069	21	98.1	1.9
December	1146	1128	18	98.4	1.6
6 Months	7094	7014	80	98.87	1.13

The splices here recorded were made automatically, at full press speed, in the usual course of work by the regular reelroom force of *The New York Times.* The loss of splices resulted not from mechanical failures but was incidental to the application of splicing glue during the preparation of rolls for splicing.

It should be stated that the Autopaster always works at full press speed, whatever that may be, and never requires that speed be reduced for its operation. It may be used successfully at all press speeds ranging between zero and 70,000.

It is no exaggeration to say that the invention of the Autopaster completes the web-fed printing press. It has converted it into a self-fed machine capable of continuous operation at full speed for indeterminate periods of time.

We suggest that this advertisement be filed for future reference, as it will not be repeated.

The Autopaster is broadly covered by patent in the United States and foreign countries.

WOOD NEWSPAPER MACHINERY CORPORATION

Makers of Fine Newspaper Machinery

501 Fifth Avenue, New York

Printing Patents On the Upgrade

Several Offset-Lith Patents Appear, Line-casting Machine, Printing Press and Plate-Finishing Claims Granted

JANUARY-FEBRUARY

Printed Copies of Patents Are Furnished by the Patent Office at 10 Cents Each. These May Be Obtained by Addressing Commissioner of Patents, Washington, D. C.

1,939,681. MAGNETIC PLATE ATTACHMENT FOR PLANOGRAPHIC PRESSES. John Stuart Fleming, Toronto, Ontario, Canada, assignor, by mesne assignments, to Niagara Fold, Inc., Niagara Falls, N. Y., a corporation of New York. Application September 22, 1927. Serial No. 221,183. 10 Claims. (Cl. 101 — 378.)

1. In a printing device, in combination, a plate cylinder having a plurality of peripheral sections providing seats for receiving flexible planographic printing plates in operative position thereon, a magnetizing coil for each of the peripheral sections for magnetizing the same, and means for selectively energizing or de-energizing the coils.

1,939,702. MACHINE FOR PRODUCING JUSTIFIED GROUPS OF IMPRESSIONS. Henry Beetle Hough, Martha's Vineyard, Mass. Application May 16, 1931. Serial No. 537,921. 31 Claims. (Cl. 199 — 71.)

1. In a machine, a single group of matrices having characters, means carrying an element for receiving impressions of certain of the characters, a pattern having character representations, means for spacing the character representations in the pattern so that their relationship to one another is similar to that of the impressions to be produced, and means for causing the character representations to actuate the certain characters to produce the impressions.

1,939,749. PRODUCTION OF NEGATIVE FOR OFFSET PRINTING PLATES. John Williams, Chicago, Ill. Application March 31, 1932. Serial No. 602,147. 7 Claims. (Cl. 41 — 46.)

1. The method of producing a negative for use in the production of offset printing plates, which consists in producing an etched plate of the matter to be printed, then producing by impression from the plate a reverse of such matter upon a hard non-metallic plate to form a die plate, then taking from the die plate, by pressure, an impression upon a transparent plate, which is a reverse of the die plate and a positive of the original etched plate, and then rendering portions of the negative opaque, and from which negative a print may be obtained upon the printing surface or plate.

1,939,814. APPARATUS FOR TESTING PRINTING INK AND PAPER. Fred W. Hoch, Brooklyn, N. Y. Application February 15, 1930. Serial No. 428,850. 13 Claims. (Cl. 73 — 51.)

2. In an apparatus, the combination with an ink dispensing fountain supplying a substantially non-yieldable roll, of a cooperative substantially non-yieldable roll whereby ink may be applied to a sheet of paper between the rolls, means for measuring the thickness of ink film as the same is applied to the paper, means for measuring the squeeze pressure on the paper during the application of ink and means for use in measuring the coverage of a measured quantity of ink in the fountain.

6. In an apparatus the combination with an ink fountain and a plate roll supplied thereby, of an impression roll for cooperating with the plate roll, means for feeding paper between the rolls, micrometer means for measuring the linear separation between the rolls micrometer means for measuring the thickness of ink film supplied by the fountain to the paper and means for measuring the pressure on the paper after passing between the rolls for use in determining offset of the ink applied to the paper.

1,940,060. PRINTER'S REGISTERING DEVICE. Elmer F. Noell, Cincinnati, Ohio, assignor to The Printing Machinery Company, Cincinnati, Ohio, a corporation of Ohio. Application May 31, 1929. Serial No. 367,389. 8 Claims. (Cl. 101 — 387.)

1. A printers' registering device, comprising in combination with a clamping jaw, relatively movable wedging and clamping members for insertion within a groove of a foundation support, the members being provided with interconnecting guiding means for restricting the relative movement of the members to a plane inclined to the face of the support, and means for maintaining the spacing of the members.

1,940,178. SLUG SAWING MACHINE. Charles L. Mohr, Wilmette, Ill., assignor to Mohr Lino-Saw Company, Chicago, Ill., a corporation of Illinois. Application March 4, 1931. Serial No. 520,009. 13 Claims. (Cl. 29 — 69.)

1. In a machine for sawing linotype slugs, the combination of a frame, a rotary power driven saw mounted thereon, a work holder for carrying the linotype slugs into engagement with the saw, link means pivotally supporting the work holder on the frame whereby the holder is movable toward and away from the cutting edge of the saw during the cutting operation, a guide rod extending between the work holder and the frame, a first member for connecting one portion of the rod with the work holder, and a second member for connecting another portion of the rod with the frame, one of the members having pivotal movement and supporting the rod for endwise sliding movement relative thereto.

1,940,411. STROBOSCOPE. Ernest Frischknecht, Long Island City, N. Y., assignor to The Teleregister Corporation, New York, N. Y., a corporation of Delaware. Application March 17, 1931. Serial No. 523,270. 41 Claims. (Cl. 175 — 183.)

8. The combination of a mechanism for producing a desired constant number of pulses to operate a relay to be tested, two sets of means for controlling the transmission of a single series of a variable number of pulses, two sets of means for controlling the transmission of an indefinite number of series of variable pulses, two sets of means for controlling the transmission of a continuous series of pulses, the two sets of means permitting two relays to be tested simultaneously.

1,940,539. DEVICE FOR MAKING CORRECTIONS ON LITHOGRAPHIC PRINTING SURFACES. Rudolf Fritsche, New York, N. Y. Application June 8, 1932. Serial No. 616,115. 2 Claims. (Cl. 51 — 8.)

2. A device for correcting lithographed plates, comprising a container having a back against which the lithographed plate is adapted to be placed, upstanding walls projecting substantially at right angles to the back one of the walls acting as the bottom member, and a front member coacting with the bottom member and the other parts of the container for presenting a receptacle, means carried by the bottom for supporting the plate thereon, a mask means for holding the mask over part of the plate and a water operated hand-manipulated sand blast device for directing water and sand against the mask and the desired spot on the plate, the water and sand falling into the receptacle, the sand blast device having an intake tube extending into the receptacle so that some of the water and sand in the receptacle may be used over and over.

1,941,148. PRINTING PLATE. George R. Keltie, Woonsocket, R. I., assignor to American Wringer Company, Inc., Woonsocket, R. I., a corporation of Rhode Island. Application August 6, 1932. Serial No. 627,732. 2 Claims. (Cl. 101 — 395.)

1. A printing plate consisting of an intermediate fabric layer, a printing layer of impression forming resilient soft material adhered to the front of the fabric layer, whereby blanks may be cut in the printing layer and readily removed from the fabric layer to form resilient printing characters from the soft material layer and a backing layer consisting solely of light flexible hard material having substantially the same coefficient of expansion as the soft material printing layer adhered to the back of the fabric layer.

1,941,495. SLEEVE FOR PRINTING PRESS PAPER ROLLS. William Schoultheis, Southgate, Ky., assignor to The Scripps-Howard Supply Company, Cincinnati, Ohio, a corporation of Ohio. Application November 21, 1932. Serial No. 643,646. 5 Claims. (Cl. 242 — 68.)

4. A chuck engaging sleeve for paper rolls comprising a tubular member formed with a full length slot to facilitate insertion into the paper roll, a kerf extending inwardly from the outer end of the tubular member, and a driving lug engaging notch extending inwardly from the last named end of the tubular member.

1,941,544. FOLDING AND WRAPPING MACHINE. George J. Egenolf, Indianapolis, Ind., assignor to The J. L. MacDaniel Printing Company, Indianapolis, Ind., a corporation. Original application April 20, 1929, Serial No. 356,684. Divided and this application January 5, 1931. Serial No. 506,782. 4 Claims. (Cl. 93 — 2.)

1. A folding and sealing machine including a deck plate having a groove therein, reciprocating article wrapping members operation in the groove, article folding mechanism positioned at one side of the groove, wrapping material supply and cut-off mechanism positioned at the opposite side of the groove, and mechanism for operating the folding mechanism and the supply and cut-off mechanism to deliver a folded article and wrapping material therefor to the wrapping members in timed relation.

1,941,597. AUTOMATIC WEB MEASURING AND FEEDING DEVICE. John J. Cavagnaro, Ridgewood, N. J. Application January 23, 1930. Serial No. 422,705. 22 Claims. (Cl. 271 — 2.4.)

1. The combination with means for performing an operation on a part of a web while stationary, of web feeding means comprising positively intermittently operated measured slack forming means on one side of the first-named means, and means independent of the measured slack forming means on the other side of the first named means for taking up the slack when the web is released.

1,941,629. ATTACHMENT FOR ROUTING MACHINES. Spencer W. Small, Missoula, Mont. Application January 6, 1931. Serial No. 507,014. 5 Claims. (Cl. 90 — 11.)

1. A flat work attachment for rotary routing machines comprising a cylindrical shell for circumferential disposition around the usual routing cylinder, a ring gear on the shell, a work supporting bed plate provided with a rack for engagement with the ring gear on the shell, guide means for the bed plate.

1,941,679. LINE-CASTING MOLD. Lewis Geisert, Philadelphia, Pa. Application September 20, 1932. Serial No. 634,028. 8 Claims. (Cl. 199 — 55.)

1. In a line-casting machine, the combination with the mold, mold cap and liners, of mechanism constituting both means for locking the cap in operative relation to the mold and to the liners and for adjusting the cap to permit replacement of the liners, the mechanism comprising a member movable with the mold cap, an axially fixed element engaging the first name member and means operable to rotate the axially fixed element for advancing and retracting the member in a predetermined path.

1,941,729. MAGAZINE ADJUSTING DEVICE FOR TYPOGRAPHICAL COMPOSING MACHINES. Christian Augustus Albrecht, Berlin, Germany, assignor to Mergenthaler Linotype Company, Brooklyn, N. Y., a company of New York. Application May 25, 1932, Serial No. 613,401, and in Germany May 27, 1931. 9 Claims. (Cl. 199 — 20.)

1. In a typographical composing machine, the combination of a plurality of magazines, a shaft and a cam thereon operable to adjust the magazines to respective operative positions, conjointly operable means for actuating the shaft for the adjustment, and a clutch whereby one of the actuating means may be coupled with or disconnected from the shaft at will to permit the operation of the other actuating means singly for effecting the adjustment of the magazines beyond their operative positions.

1,941,730. TRIMMING MECHANISM OF TYPOGRAPHICAL LINE CASTING MACHINES. Christian Augustus Albrecht, Berlin, Germany, assignor to Mergenthaler Linotype Company, Brooklyn, N. Y., a company of New York. Application May 25, 1932, Serial No. 613,402, and in Germany November 26, 1931. 11 Claims. (Cl. 199 — 59.)

1. In slug-trimming mechanism for typographical line casting machines the combination with two knives and two slides carrying them with a capacity for the knives to be moved farther from, and nearer to, each other in parallel relationship, of means constantly tending to move at least one of the knives towards the other, and cams opposing the means and capable of adjustment to move the knife or knives from any set position directly to any other set position.

1,941,737. TYPOGRAPHICAL COMPOSING MACHINE. Harold A. Burt, St. Albans, N. Y., assignor to Mergenthaler Linotype Company, a corporation of New York. Application May 12, 1932. Serial No. 610,765. 20 Claims. (Cl. 199 — 20.)

1. In or for a typographical composing machine adapted to be equipped with matrix magazines with or without matrix releasing escapements, a supporting frame common to both kinds of magazines and provided with a bank of escapements to cooperate with a magazine devoid of escapements and also with a bank of escapement actuating elements to cooperate with a magazine carrying escapements.

1,941,747. PRINTER'S QUOIN. Samuel Holt, Brooklyn, N. Y., assignor to Mergenthaler Linotype Company, a corporation of New York. Application December 29, 1931. Serial No. 583,692. 3 Claims. (Cl. 254 — 40.)

1. In or for a printer's galley, a locking quoin comprising a member formed by stamping blank from a sheet of material and folding the blank to form a box-like housing, a member stamped from another piece of material and adapted to fit within the other member, a pair of coil springs attached at opposite ends to the members and tending to draw them together, an eccentric located between the two members and adapted to be actuated to force the inner member outwardly against the action of the springs, the box-like housing having top and bottom walls, end walls, and a rear wall, the rear wall having eyelets formed therein near its opposite ends and adapted to anchor the rear ends of the springs, and the top wall having openings formed therein above the eyelets to facilitate the attachment and detachment of the springs and eyelets.

1,941,748. SLUG CASTING MACHINE. Samuel Holt, Brooklyn, N. Y., assignor to Mergenthaler Linotype Company, a corporation of New York. Application July 18, 1932. Serial No. 623,141. 18 Claims. (Cl. 199 — 61.)

1. In or for a slug casting machine equipped with a movable line transporter and having a galley to receive and hold a column of slugs, the combination of a reciprocable device for

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stacking the slugs in the galley, and means actuated by the line transporter for operating the stacking device, the means acting in response to the movement of the transporter in one direction only to effect a complete reciprocation of the stacking device.

1,941,754. WEB CUTTING AND SHEET FORWARDING MECHANISM. Cecil George Quick, Eltham, London, and William Arnold Whitehead, Southall, England, assignors to R. Hoe & Co., Inc., New York, N. Y., a corporation of New York; Irving Trust Company, receiver. Application May 13, 1930, Serial No. 451,955, and in Great Britain September 11, 1929. 10 Claims. (Cl. 164 — 68.)

5. In a web cutting and sheet forwarding mechanism for use with a printing machine, a cutting mechanism, a traveling endless flexible member, a plurality of pressure bars secured to the member, spindles on the pressure bars, grippers on the spindles, a guide co-extensive with the flexible member, rollers connected to the member and adapted to follow the guide, other rollers mounted on arms carried by the spindles, a second endless guide engaged by the other rollers and having a cam portion adapted to rock the spindles to move the grippers into operative position.

1,941,848. PERFORATING ATTACHMENT FOR PRINTING PRESSES. Samuel Meckler, St. Paul, Minn. Application March 21, 1932. Serial No. 600,143. 2 Claims. (Cl. 164 — 98.)

1. A perforation device for printing presses having a platen, grippers adapted to press paper on the platen, a type chase and friction means for retaining set-up type in the chase; the perforation device comprising an elongated main bar of quadrangular form in cross section, the height of the main bar being less than the height of the type, the main bar being provided with an elongated deep slot intermediate its ends, an elongated secondary bar reciprocable within the slot and its ends terminating in spaced relation to the ends of the slot, spring actuated means normally holding the secondary bar retracted toward the bottom of the main bar, in the slot, an elongated perforation blade removably secured in the secondary and having a serrated edge protruding therefrom, the spring actuated means comprising a pair of protruding contact members one in each end of the slot and spring means normally pressing the members outwardly from the main bar, the protruding contact members adapted to contact yieldingly each on the face of a gripper, and means actuated by the contact members to reciprocate the secondary bar outwardly and cause its perforation bar to perforate paper on the platen, the means actuated by the contact members comprising rocker-cams pivotally mounted in the main bar intermediate each contact member and the adjacent end of the secondary bar, the outer ends of each such cam engaging a contact member and the opposite end loosely engaging a notch in the adjacent end part of the secondary bar, the yielding inward movement of each contact member causing a rocking action of its cam to project the secondary bar as described.

1,941,957. KNIFE-CARRIER FOR PAPER CUTTING MACHINES. Karl Stegmann, Bautzen, Germany, assignor to Johne-Werk Grafische Maschinen-Aktiengesellschaft, Bautzen, Germany. Application July 12, 1930, Serial No. 467,435, and in Germany July 16, 1929. 2 Claims. (Cl. 164 — 58.)

1. In a device a blade support having a double face, the blade support being laterally bevelled, a blade detachably and interchangeably secured to the straight face of the support, a resiliently acting metal plate secured to the inclined face of the support, the plate resiliently cooperating with the blade adjacent the edge thereof.

1,942,243. PLATE DEPOSITING TABLE FOR CASTING MACHINES. Hanns Fritz, Wurzburg, Germany, assignor to firm "Schnellpressenfabrik Koenig & Bauer, Aktiengesellschaft," Wurzburg, Germany. Application May 20, 1932, Serial No. 612,542, and in Germany October 10, 1931. 20 Claims. (Cl. 22 — 2.)

1. In a casting machine for hemispherical plates having a stationary vertical casting mold, and a core traveling from the mold to a plate delivering position and back, the combination of a plate receiving table positioned to be engaged by the core and carried along thereby and resilient means for opposing such movement of the table.

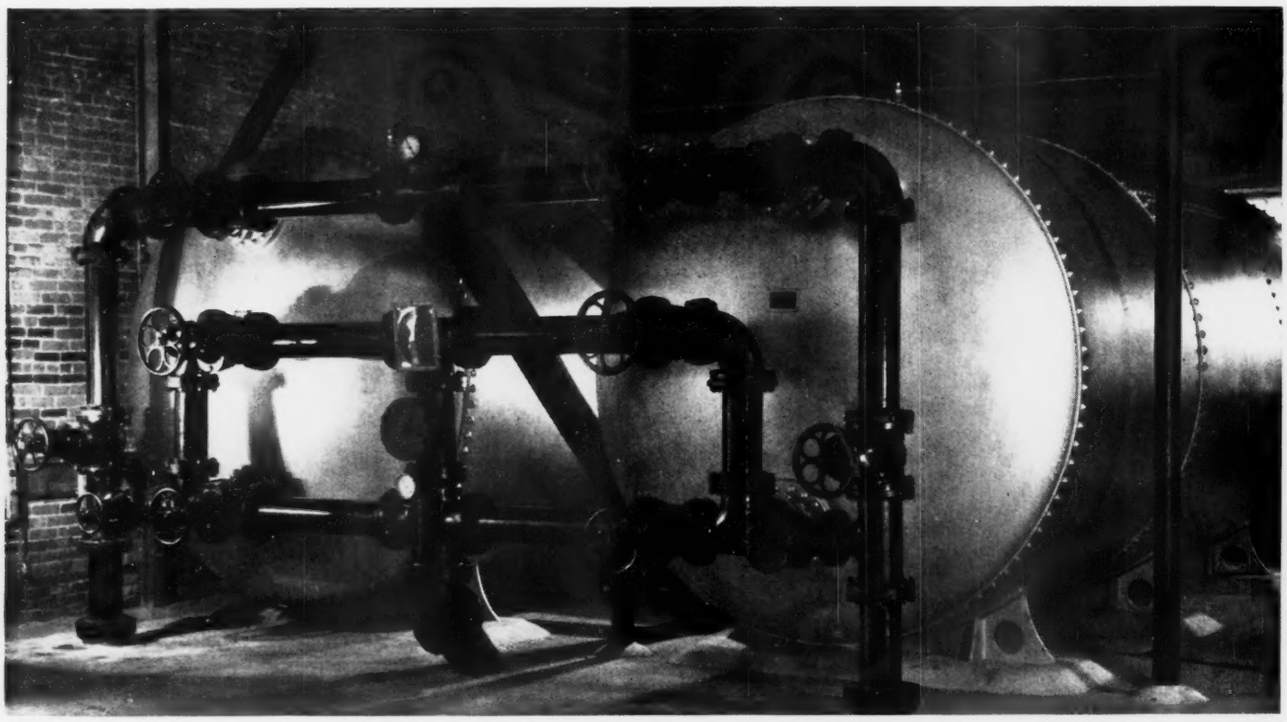
1,942,326. MATRIX-SETTING AND TYPE-LINE-CASTING MACHINE. Julius Dorneth, Konradshohe, near Berlin-Tegel, Germany, assignor to Typograph G. m. b. H., Berlin, Germany. Application February 23, 1933, Serial No. 658,211, and in Germany March 14, 1932. 7 Claims. (Cl. 199 — 4.)

1. A matrix-setting and type-line-casting machine of the type having matrix bars freely suspended vertically on wires and guided vertically in a circuit having a magazine filled with matrix release devices and having a collecting and casting station situated beneath the magazine, means engaged by the lower ends of the matrix bars for effecting parallel and steady guiding of the matrix bars in a vertical position on their way from the magazine to the collecting point in front of the casting point.

1,942,408. STEREOTYPE PRINTING PLATE. Martin W. Brueshaber, Chicago, Ill., assignor to Goss Printing Press Company, Chicago, Ill., a corporation of Illinois. Application March 13, 1931. Serial No. 522,314. 12 Claims. (Cl. 101 — 375.)

10. A curved stereotype plate having on its inner surface a plurality of circumferential ribs and a plurality of longitudinally extending ribs, the longitudinal ribs being formed with sides which converge towards the axis of curvature of the plate, the sides nearest to the central portion of the plate converging towards points beyond the outer surface of the plate, whereby the plate can be removed from the mold without distortion.

The Picture Story of "Wood Dry Mats in the Making" No. 2



60 *gallons of filtered water for each Wood Mat*

THE filter system is all important in the making of a Wood Dry Mat. The filter must remove all traces of impurities which have a tendency to attach themselves to the fibres and thus produce undesirable results. Sixty gallons of water are used per mat, all of which must circulate through this purifying apparatus. Filtration and water treatments, as applied in the Wood process, assure the dry mat consumer of a uniform product free from all foreign matter.

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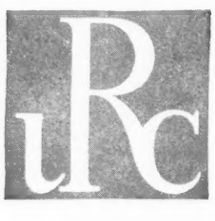

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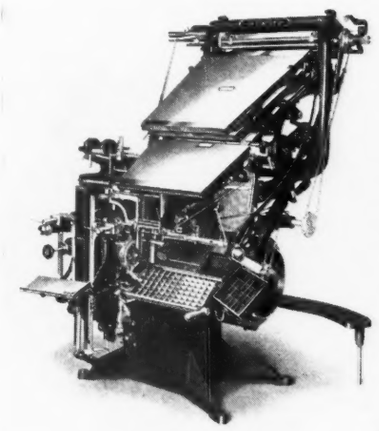
New Intertype For Display Purposes

Magazines Changed From Front of Machine by Means of Slides Mounted in Frames—Shifting Mechanism Like "C"

By L. W. Willis*

The new Intertype Model H Display machine provides for keyboard composition of display lines up to and including all full-width 30-point and some 36-point faces. It carries three interchangeable Intertype extra-wide 72-channel split magazines and can be equipped with either the standard 90 or 72-character keyboard, as desired.

In general construction, the Model H resembles the Model C Intertype with the quick-change chain magazine shift. The magazines, like the top extra-wide split magazine on the Model G combination Text-Display Intertype, are about two inches wider than former display magazines, and are interchangeable on both machines.



View of Model H Display Intertype showing bottom split magazine which has been slid forward and is resting upon a slide ready to be lifted off so that it may be replaced by another magazine containing a different matrix font.

The new Model H Display Intertype, it is stated, will increase the amount of display composition that can be set from the keyboard and main magazines.

One of the features which it is claimed will attract interest in the Model H Intertype is its capacity to carry three display fonts, each with a practical range of available characters, that is, 72 different characters, even in full-width 30-point and some of the 36-point faces.

The new method of handling split magazines on the Model H Intertype makes the job of changing them much easier than heretofore. Each magazine rests solidly on its frame as on all other Intertypes. On each frame there is provided a pair of flat bars which rest lengthwise of the magazine and lie freely beneath it. The bars are tied together at their forward ends by a cross brace positioned just to the rear of the magazine escapements.

To lower any one of the magazines to the position shown in the illustration, the operator simply lifts the cross brace with his fingers under the front end of the magazine. The bars will then be lifted, too, and serve as levers for raising the forward end of the magazine high enough to disengage it from the usual holding lugs on the magazine frame. The magazine will then slide out by gravity far enough to be entirely free of all other parts of the machine. In this forward position the magazine is low enough to be lifted off.

To replace a magazine, the operator rests it on the bars and locates the center bar on the under side in a recess on the tie or brace. He then pushes against the front end of the magazine to slide it up on its frame until it falls behind the usual holding lugs. The lifting bars then fall down free of the magazine, which is ready for operation.

Like all other Intertypes, the Model H Display Machine, can be furnished with auxiliary side magazine equipment for increasing its capacity up to and including condensed 60-point faces, if desired. Also, the Three-way Intertype Autospacer can be supplied with the Model H. This device quads and centers display lines automatically.

*Patent and Research Engineer, Intertype Corporation, Brooklyn, N. Y.

Claybourn Holds Open House

During the three-week period from February 12 to March 3, the Claybourn Corporation, Milwaukee, Wis., will hold open house to all commercial printers and publishers, during which time a new multi-color press development will be demonstrated. The press will be operated at a speed of 4000 or more sheets per hour, printing as many as five colors in one operation.

It is claimed that through new developments which permit of elimination of makeready, by the use of perfected non-stretch plates, by pre-determining line-up and register mechanically, and by micrometrically positioning the feeder pile the press can be gotten ready for production in quicker time than is ordinarily required for the two color printings.

A number of paper manufacturers and ink makers are joining the Claybourn Corporation to demonstrate the results of their products in multi-color printing. The subject matter for this demonstration has been furnished by publishers and printers in various parts of the country. Perfected plates will be made from originals sent in.

Commercial printers, publishers and mechanical executives are invited to attend after indicating what date they will attend in order to permit the Claybourn Corporation to make up schedules for the convenience of visitors.

Al Hammond Moves

Al Hammond is now in charge of the press and stereotype departments of the Santa Barbara (Cal.) *News* and *Press*. Mr. Hammond in writing the Engineer states that he thinks highly of this publication.

Borton Pittsburgh Manager

R. G. Borton, manager's assistant since 1918 for American Type Founders at the Pittsburgh branch, was appointed manager, effective February 5. He succeeds Robert F. Heywang who has been joint manager of Pittsburgh and Buffalo branches and who will now devote all his time to the Buffalo branch.

Mooney's Spaceband Cleaning Machine

Holds Sleeve Against Disk Revolving at 300 r.p.m., Which Contacts Each Sleeve a Distance of 84½ Feet

By STAFF WRITER

A SPACEBAND cleaning machine has been devised by Howard B. Mooney, chief composing room machinist of the Pittsburgh *Post-Gazette*. In January, Mr. Mooney was granted a patent on the method of removing the oxide stain which accumulates on spaceband sleeves after having been used during a several-hour operating shift. The machine also polishes the wedges and sleeves automatically with graphite in a separate operation.

The full operation of removing the oxide stain from the spaceband sleeve together with the application of graphite to the wedge while it is being cleaned, requires two seconds. Thus, it is claimed, a full set of thirty spacebands may be cleaned automatically in one minute.

In actual practice, a set of spacebands to be cleaned is placed in a box of the conventional type at the top of the machine. The box is self-adjusting for all thicknesses of spacebands now on the market.

The spacebands are released one at a time and drop downwardly through a chute until caught and supported by two rawhide pins opposite a revolving buffer disk. A sliding head moves forward, pushing the spaceband against a revolving head or disk which is faced with a specially prepared layer of felt 3/16 in. thick, for taking off the deposit of metal oxide

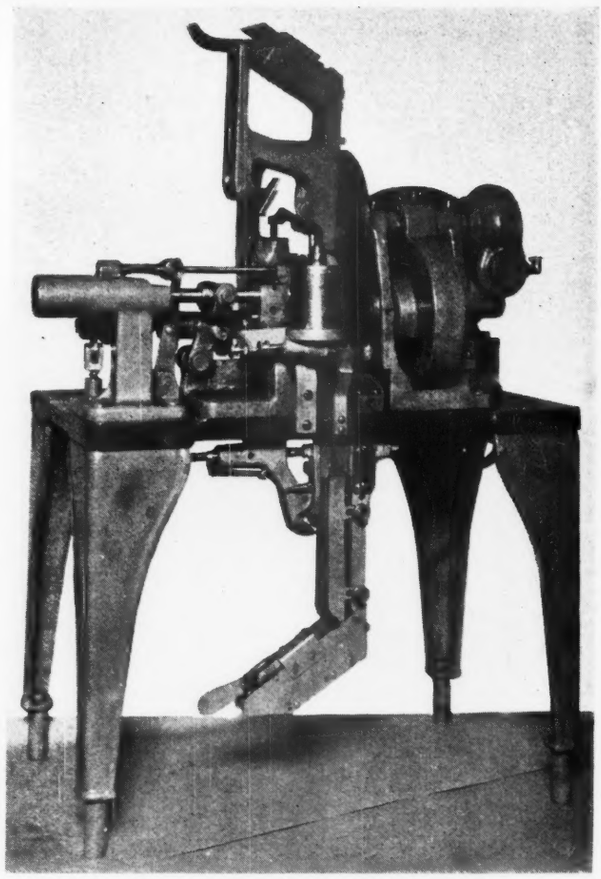


Fig. 1.—View of Mooney Spaceband Cleaning Machine (taken from rear). The spacebands are deposited in the holder at the bottom of the machine after having passed through the machine. The machine is entirely automatic in action after putting a set of spacebands in the machine and turning on the power.

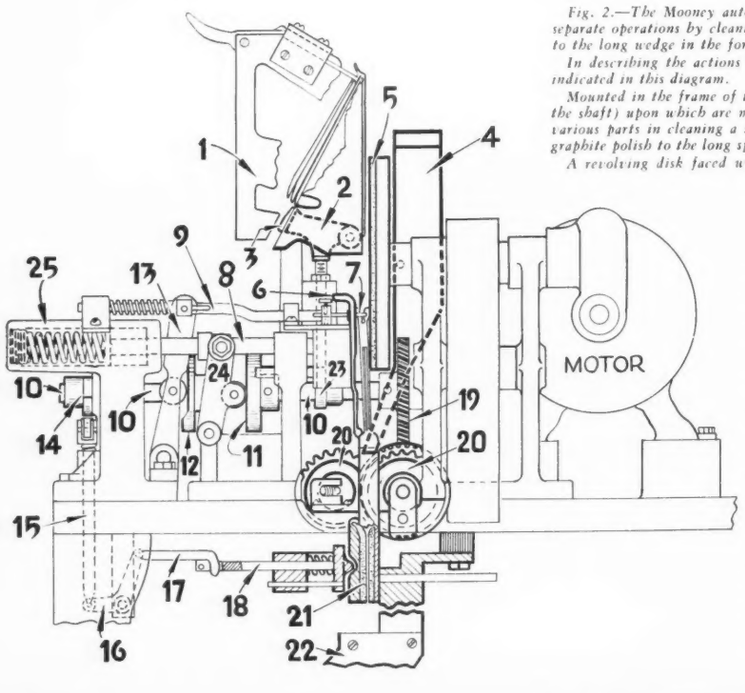


Fig. 2.—The Mooney automatic spaceband cleaning and polishing machine functions to perform two separate operations by cleaning the sleeve free of all oxide at the casting point and furnishes lubrication to the long wedge in the form of a thin film of graphite.

In describing the actions of the machine it is well to state that it is driven by a 1/6 h.p. motor as indicated in this diagram.

Mounted in the frame of the machine is a shaft 10 (indicated at three points throughout the length of the shaft) upon which are mounted several cams 11, 12, 14 and 23, which control the movements of the various parts in cleaning a spaceband sleeve free of all oxide at the casting point as well as applying a graphite polish to the long spaceband wedge.

A revolving disk faced with 3/16-in. specially treated felt is the active element which contacts the entire casting side of the spaceband sleeve and removes the oxide stain with the assistance of a deoxidizing agent.

The spacebands to be cleaned are placed in the box 1 at the top of the machine. The reciprocating action of pawls 2 and 3 release one spaceband at a time from the box. The pawls 2 and 3 are actuated by cam 23 on the continuously revolving shaft 10. As each spaceband is released it drops by gravity and passes through the chute to a point where its sleeve lugs engage two rawhide pins, one of which is shown at 7, with its sleeve opposite the revolving disk 5. A plunger 6 on rod 8 is then urged forward under a 16-lb. pressure of spring 25, being permitted to move forward because the roller in lever 24 follows the dip in cam 11 on shaft 10.

The dwell of the spaceband is of sufficient duration so that the cleaning area of the disk 5 is equal to about 84½ ft. while running at a speed of 300 r.p.m. The plunger 6 is then retracted. At this time the two rawhide pins 7, adjustably mounted in rod 9, also are retracted due to the action of lever 13 which is actuated by its roller contact against revolving cam 12 affixed on shaft 10. The spaceband drops by gravity between two rubber rolls 20 and 20, which are caused to revolve by gear 19 in engagement with gears on the rubber roll shafts. The left-hand roll 20 in the diagram is flexibly mounted under spring pressure to accommodate the tapered shape of the spaceband, yet continously retain rolling contact against the wedge. The spaceband is fed forcibly from the rolls 20 and 20 into two felt pads, one of which is indicated at 21. Meanwhile, graphite flows from the spout of the container or box 4 and falls upon the rubber rolls and the felt pads so as to cause a film of the graphite to adhere to the spaceband wedge for lubricating purposes. The movable pad 21, which is being held against the spaceband under tension of a spring, is now retracted by cam 14 on shaft 10, through connection of rod 15, bell crack 16, fork 17 and rod 18. The spaceband is now released and slides down the rails (not shown) in the chute 22, from which it, as well as the other spacebands in the set are lifted out to be returned to the line-casting machine.

on the sleeve under a 16-lb. pressure exerted against the sliding head by a spring shown in the diagram.

The sliding head is in line with the felt cleaning disk and prevents the spaceband sleeve from rocking or vibrating.

The felt cleaning member or disk revolves in a direction away from the deposit of metal on the casting side of the spaceband sleeve. This prevents rounded edges.

The cleaning area against the felt disk is about 84½ ft. at a speed of 300 r.p.m.

After the sleeve has dwelled against the disk the sliding head is retracted and the spaceband is released in a vertical position and drops between two rubber rollers. The rollers in turn force the spaceband between two felt cleaning members. A constant flow of graphite on the two felt pads below the two rubber driving wheels constitutes a secondary cleaning process and leaves a slight film of graphite on the spaceband.

Each spaceband is released from between the two pads automatically and is dropped into a chute, after which it comes to rest on two rails, ready to be taken with the other spacebands to the machine from which they were removed for the cleaning operation.

The machine weighs about 100 pounds and is driven by a 1/6 h.p. motor, which is an integral part of the device.

Air Jet Causes Sections to Pull Evenly

By E. S. EBNER*

In most newspaper pressrooms it is customary for the pressman to build up the cutting cylinder with tape or emery paper in case of a difference in the size of the product so as to keep the two sections pulling evenly into the folder and cut both sections in an even manner.

Considerable time is lost when the cutting cylinder is built up in an effort to obtain an even pull through the cylinders where the sections are not of equal size.

As a substitute means for the packing I ran an air line made from ¼-in. pipe to the folder and placed a valve in the line

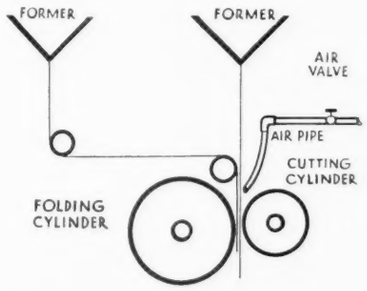


Diagram showing application of an air pipe to the folder of a Hoe Octuple Printing Press which is intended to eliminate packing the cutting cylinder with tape or emery paper when two sections of unequal size are being printed.

at a convenient position where the fly boy could reach it without changing his position at the folder. The pipe is run back of the two sections in the center of the web and as close as possible above the point where the two sections pass between the folding and cutting cylinders.

The air outlet end of the pipe is flattened to a narrow slit in order to spread the air and obtain as much pressure as possible. Our air pressure varies somewhat from a maximum of 90 lbs. but we have no difficulty in regulating the air jet by means of the valve mentioned above.

This device is used on our Hoe octuple press and with the cylinders set at ⅛-in. aperture we can run a one-page bill or the like with but few spoils.

*Pressroom Foreman, Gary (Ind.) *Post-Tribune*.

Newark *Star-Eagle* Buys Another Form-O-Scorch

Analyze the Form-O-Scorch from any angle you choose,

Cost—Upkeep—Operating Expense —Production—Durability,

Then send in your order

"The Passiac, N. J., *Herald-News* has installed a Form-O-Scorch. James Monohan, stereotyping foreman, says he likes it very much and that it is a big improvement over the old gas scorcher formerly in use."
—*The Certified News.*

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"WHAT, *all that* Good Type Shot So Soon?"

HUNDREDS of dollars worth of selected foundry faces so badly worn that advertisers kick at their battered appearance.

Stereotyping is an ordeal for type, even for once-used line slugs in some offices. Where molding pressures are heavy and consequent mat spoilage results in frequent need for a second mat, high pressures defeat economical operation.

Type lasts longer and slugs stand up better in offices that use Certified Mats. Molding pressure can be reduced ¼ to ⅓ when you adopt Certifieds. The wear on molding equipment is less, too, postponing costly replacements.

Easy molding, together with their uniformity, quick scorching and low temperature casting are bringing more and more offices to Certified Mats. Let yours be next.

For Dependable Stereotyping use Certified Dry Mats.

Certified Dry Mat Corporation
342 MADISON AVENUE NEW YORK, N. Y.

Certified DRY MATS

The Printing Equipment Code

(Continued from page 7)

to the Corporation. The Corporation shall accept Certificates of Value from dealers in connection with its sale to dealers in used machinery coming into its absolute possession, but not in excess of ten per cent of the price at which such machinery is sold to dealers by the Equipment Clearing Corporation.

LIQUIDATION AND LIFE OF CERTIFICATES

In the liquidation of Certificates of Value, they shall be honored by all manufacturers, dealers and importers of machinery voluntarily participating in this plan, but only in connection with the purchase of new machinery in transactions where there are no trade-ins and then in an amount not in excess of ten per cent of the list price of new machinery purchased by the holder of Certificates.

Certificates of Value will have no value after a period of five years from the date of issue. Certificates may be wholly or partially used during the five-year period. Except manufacturers, including their representatives and their direct dealers, and importers, any holders of certificates will be at liberty to sell them to others who may be in the market for machinery.

PROVISION FOR COST ACCOUNTING

It is provided under "Unfair Competitive Practices" that no equipment, machinery or supplies will be sold at a price or upon terms or conditions which will result in the customer paying to the seller less than their ascertainable value for the goods received. The costs are to be determined according to sound principles as set forth in Exhibit "B" of the Code. However, *a member of the Industry and Trade may sell below his own cost to meet the price of a lower-cost competitor.*

The principles for determining costs will be found in Exhibit "B," which is intended to serve as a guide in ascertaining the costs of manufacture, both direct and indirect. The variety in the character of the several businesses involved makes a uniform cost-accounting system impracticable. For that reason it is made clear what the elements of costs are and the general principles upon which they should be assembled into unit costs are presented.

CODE ADMINISTRATION

The Code also contains provisions for the organization of a Code Authority to assist the Administrator in effectuating its policies. The Code Authority will consist of the Executive Committee of the Association, composed of not less than five nor more than seven members. To the Code Authority there may be added not more than two additional members as the Administrator may at any time decide to be properly proportional to be selected by and to represent members of the Industry and Trade who are not members of the Association. The Administrator, in his discretion, may appoint not more than three members, without vote, as his representatives or as representatives of such groups or interests as he may specify.

A group of twenty-three major Unfair Competitive Practices suitably sub-divided into sections is included in the Code.

A standard of 40 hours is provided as the standard work week for all employees not including certain exceptions mostly of the executive class.

In another issue of the ENGINEER a more complete discussion of the Code will be presented.

Inks for Offset Lithography

Some Interesting Technical Data Presented —Why Metallic Inks Have Not Been Successfully Used in Offset Process

By PAUL FIECH*

I HAVE divided the subject of "Inks for Offset Lithography" into the following classifications: 1, Composition as compared to letter press inks; 2, Color values; 3, Cost in respect to price and coverage; and 4, Coverage and metallic inks.

Inks for Offset Lithography, owing to the nature of the offset process, vary somewhat in composition as compared to letter press inks. In defining this difference, we shall first of all, take up the matter of the two essential or principal ingredients used in the manufacture of the two types of inks, namely, the pigment or coloring matter and the varnish or vehicle which acts as the carrier for the pigment.

The question of the pigment or coloring matter in connection with offset inks is of the greatest importance. More so than in the case of letterpress inks. This, as a matter of fact, requires an explanation. A number of pigments in general use in the manufacture of letterpress inks, owing to their solubility in water, are, because of this fact, excluded in the composition of offset inks. This in no way affects their utility as pigments for letterpress inks. In this classification as an example, I might cite the pigments used in the manufacture of the standard letterpress process red. This is a derivative of the dyestuff known as Eosine. This dyestuff and its derivatives are highly soluble in water and because of this fact their use as pigments for offset inks is precluded. In this same classification are a number of other water soluble anilines and their derivatives. It is apparent therefore that great care must be exercised that only such pigments as do not bleed in water are used in the manufacture of offset ink.

OFFSET INKS OF GREATER TINCTORIAL STRENGTH

In comparison, offset inks, generally speaking, owing to the nature of the offset process, require that they be made of greater tinctorial strength than letterpress

Continued on page 26

*Martin Driscoll & Co. Address before Chicago Club of Printing House Craftsmen, November, 1933.

The tough brother of Zomo Electric Zinc

IF you prefer a *tough* zinc, you'll use A-Zee Alloy. Here is a metal that can "take it" without ever backing down. A-Zee Alloy was developed to meet specific requirements for a quick, clean etching metal that will stand unusual punishment. On a test run, a half-tone engraved on this metal gave twice as many impressions as its nearest competitor.

The N.E.A. in Cleveland, every day, makes 500 mats from one original cut of A-Zee Alloy—without the slightest injury to line or dot.

Like Zomo Electric Zinc, this metal is melted and cast in the electric induction furnace. It is therefore bound to be just as uniform and dependable as its well-known brother Zomo.

Photo-engravers who are seeking a tough metal will find the answer to their prayers in A-Zee Alloy. And, while it stands up on the mat, it's a perfect lady in the bath. You can now order A-Zee Alloy from any of the distributors of Zomo Electric Zinc.

Our Page Cost Proof of LUDLOW Efficiency

MY OPINION, after six years experience with it, can be summed up in the following sentence: the Ludlow System of slug composition is the simplest and most natural in operation, the most effective in result, and the lowest cost method for handling large display in the printing field at the present time.

Our finished product is evidence of its effectiveness; our page cost proof of its efficiency.

FREDERICK K. FORSTALL
Mechanical Superintendent
NEW ORLEANS TIMES-PICAYUNE

Ludlow Typograph Company
2032 Clybourn Avenue, Chicago, Ill.

Set in Ludlow Karnak Light and Karnak Medium. Elrod rules

Specify Decimal Parts of an Inch

A worthwhile suggestion which might well be adopted by all mechanical executives when ordering metal stock of various kinds, whether in sheet, wire or rod form, is contained in a booklet on Phosphor Bronze published by the Riverside Metal Co., Riverside, New Jersey.

The adoption of the micrometer caliper to determine the thickness of metal or the size of wire in decimal parts of an inch, and the abolition of all gauge numbers when ordering is strongly recommended.

By specifying in decimal parts of an inch there is no uncertainty as to the thickness or diameter required.

In support of these statements the company proves its contention by saying that ".07196 diam." is definite and clear but "13 gauge" could mean any of the following:

Gauge No.	American Brown & Sharpe's	Birmingham or Stubbs	Wash. & Moen	Imperial S. W. G.	London or Old English	U. S. Standard
13	.07196	.095	.0915	.092	.095	.09375

Specifying in decimal parts of an inch eliminates uncertainty and delay in the proper execution of orders.

Catalogs, Books and Bulletins

Readers of PRINTING EQUIPMENT ENGINEER who are interested in securing any of the catalogs, books or bulletins listed below can do so by checking the literature desired. Mark carefully only that literature which you wish to receive. Fill out the coupon and send it to us. The literature will be forwarded without cost except where noted.

Heating Equipment for Stereotype Metal Furnaces—Four-page illustrated bulletin describing metal-melting equipments which are applicable to metal-melting equipments made by five manufacturers.

Automatic Ejector Set—Illustrated bulletin describing newly-improved Automatic Ejector Set for application to Linotype machines.

Ideal Process Rollers—Booklet printed in the modern fashion, illustrated, describing construction and advantages of Ideal Rollers.

Riverside Phosphor Bronze, Nickel Silver and Beryllium Copper—Three booklets containing considerable technical matter relative to these metals. Any or all of these three booklets will be sent to mechanical executives.

Headaches—3c—Bulletin illustrating and describing the technique and readability of a new type face.

Have You a White Elephant in Your Plant?—Bulletin demonstrating money-making possibility by installing a line of commercial presses to reduce production costs.

Spots of Heat—Illustrated booklet telling about a variety of heating elements or units which are applicable to a wide range of uses for industrial purposes.

Printing Equipment Engineer,
1370 Ontario St., Cleveland, Ohio.

Gentlemen: Please send the literature checked above without obligation.

Name of Company_____

Attention of_____

Position_____ Dept._____

Street Address_____

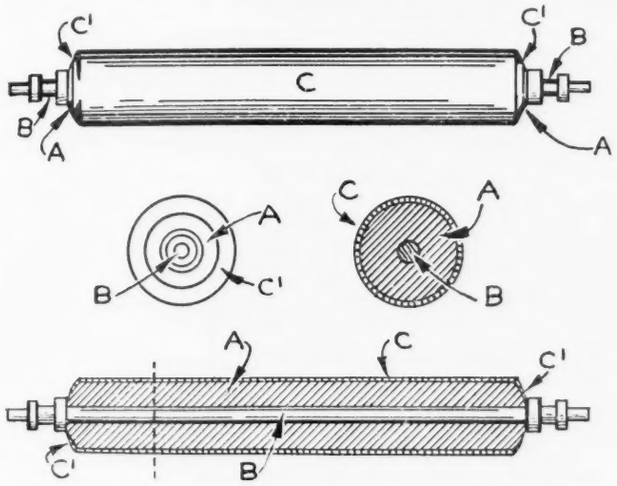
City_____ State_____

Renewable Covering for Printing Press Roller

Ernest J. Smith, superintendent of stereotyping at the Detroit *News*, has been granted patent rights upon a printing press inking roller which is so constructed as to carry a renewable outer covering or sleeve which can be discarded when worn and a new one substituted in its place.

When rubber rollers swell, proper alignment with the type form or plate cylinder is lost and imperfect printing results. It is the usual practice, in order to extend the life of the roller, to grind and resurface its outer face or perimeter.

In Mr. Smith's patent, a removable rubber tube (or a tube made of other material) of suitable gauge is provided which



Diagrams explaining details of the Smith Renewable Inking Roller Sleeve. A denotes a printers' roller which is slightly tapered at the ends. B is the shaft on which the roller is mounted. C is the rubber sleeve encircling the roller. The marginal end C of the sleeve overlaps the roller A. By this arrangement, it is claimed, the tendency of the sleeve to slip upon the roller is overcome since the sleeve fits snugly on the roller by frictional engagement and without the use of any added securing means.

may be stretched so that it will envelope the outer surface of the roller, the tension being sufficient when in position to insure the tube against creeping either longitudinally or circumferentially. The rubber tube may be removed and a new one mounted upon the roller, and in the event the rubber roller or the core become swollen through use, the latter is ground to size before encircling it with the tube or sleeve.

The tube may be of a composition having a tendency to effectually resist the disintegrating action of printer's ink, oil or other elements which may contact therewith, or to penetrate or affect the tube,

Besides its renewable means, Mr. Smith claims this roller has fine printing qualities, due to the lack of porosity in the tube covering the roller in that it will enable the pressman to obtain good printing of solids.

The roller or core *A* in the diagram may be made of rubber or any of the compositions usually employed for printers' rollers. The covering sleeve *C* is preferably made of a very smooth grade of rubber, the gauge thickness of which is substantially the same throughout its entire length in order to provide a uniform printing surface.

Colehower With Godfrey

Howard Colehower, according to the January issue of the *Monthly Bulletin* of the Philadelphia Club of Printing House Craftsmen, who was a player for three years on the University of Pennsylvania football team, and who in 1932 was selected as "All-American" tackle, is now connected with the Godfrey Roller Company in Philadelphia. Mr. Colehower was scheduled to speak at the January 11 meeting of the Philadelphia Craftsmen's Club.

Cut Stereotyping Costs—Improve Appearance

WE know that stereotypers are between "the devil and the deep blue sea." Costs must be held ***down.*** Appearance of the paper must be kept ***up.***

Your opportunity to do both is in Burgess Chrome Mats. We can prove it. Burgess Chrome Mats were developed in our laboratories to give what no other mats can.

Stereotype room after stereotype room has adopted them.

These stereotype rooms learned that Burgess Chrome Mats shrink uniformly —that they turn out better plates, assuring a better printed paper with less ink and less impression upon press blankets —that they show less lengthwise shrinkage in relation to crosswise shrinkage, saving lost lineage—that they cast at a temperature as low as the metal formula and casting conditions will permit.

A Burgess Service Man will gladly call on you. He can prove all these points. If you are interested in the probable savings and in bettering the appearance of your paper, write today. No obligation, of course.

BURGESS CHROME MATS

THE CHROME FORMULA

The Chrome Mat Formula gives Burgess Chrome Mats their superior printing characteristics —makes them easier to handle —reduces troubles—cuts costs.

BURGESS CELLULOSE COMPANY
FREEPORT, ILLINOIS

CHROME MATS

A Laboratory Product

WHY
WE STICK TO IMPERIAL

Lower Yearly Metal Costs

"IF you had asked me that question four years ago I probably would have been at a loss to answer you, but after five years of 'sticking' to Imperial Type Metal I can tell you exactly our reason. Here it is:

"Over a period of the last ten years we have kept a very close tab on our metal costs. Five years ago we were induced to change to Imperial. If you could see our record of our first five years and these last five years you would get the answer immediately. The figures on the last five years show lower metal costs than on the first five years, and, mind you, I am taking into account the fluctuation in our quantity requirements. There are other reasons why we stick to Imperial, such as freedom from machine and metal troubles, lower casting temperatures, etc., but the big reason is lower yearly metal costs."

Imperial
METAL

THE IMPERIAL TYPE METAL CO.
Philadelphia · New York · Chicago · Los Angeles

Greene to Make New Connection

E. W. Greene, who for many years was in charge of the engraving department of the Christian Science Publishing Society, Boston, Mass., is no longer connected with that institution, he having severed his relations the first part of January. It is not known at this time just where he expects to make a new connection.

Mr. Greene has been the photo-engraving member of the A. N. P. A. and A. A. A. A. Joint Committee on Newspaper Printing since its inception. In this connection he has done considerable work and bears a very high reputation in the estimation of the Committee and the A. N. P. A. membership.

At the Cleveland Mechanical Conference he delivered a most interesting and enlightening paper which contained valuable information on photo-engraving technique.

New Bantam Representatives

The Bantam Ball Bearing Company, South Bend, Ind., is now represented in the Chicago territory by R. B. Nichols, 1835 E. 78th St., Chicago, Ill.

E. T. Cobb is representing the Bantam Ball Bearing Company on industrial ball bearing and roller bearings in Tennessee, with headquarters at present at Pine Valley, Miss.

Mergenthaler Now Sells Automatic Ejector Set

Announcement is made by the Time Saving Device Co., Inc., that the Mergenthaler Linotype Co. has been appointed selling agent for the new, improved Automatic Ejector Set. This device is applicable to Linotype machines and automatically sets the ejector blade at the time the operator changes from one mold to another. The product has been on the market for the past three years and is widely used. Anyone desiring information may obtain it from any Mergenthaler Linotype Co. branch or from the Time Saving Device Co., 599 Kenmore Ave., S. E., Warren, Ohio.

. . Offset Inks

(Continued from page 23)

inks. The best results in offset printing, are obtained with inks of the greatest tinctorial strength possible. In this manner a minimum amount of ink is carried to the blanket with the greatest amount of tinctorial value. This principle, to a lesser degree, also applies to letterpress printing. However, in letterpress printing, weaker inks can be used by carrying more color, in many instances without disastrous results. If weak inks are used in offset printing, however, the work is impaired to a considerably greater degree. The reason for this is apparent as the blanket can only take a certain amount of ink, and when this limit is reached any further amount results in plate or blanket trouble. This, as a consequence, impairs final results of the job.

"GREASING" AND "SCUMMING"

We will now go into the question of the vehicle or carrier for the pigment, namely the Varnish. Up to the present writing the only known varnish for use in

the manufacture of offset inks is linseed varnish. I know of no substitute being used with any degree of success. This varnish must first of all be pure and free from acid. If it is not, which sometimes occurs, the ink will cause a chemical action on the plate known as "greasing" and the work will suffer as a consequence. If this condition is allowed to continue, it will in time, ruin the plates. It is also of prime importance that the varnish used is of the proper viscosity for the particular pigment to be ground. This is necessary to hold the pigment in suspension after the ink is ground. If this is not done you have a condition on the plate known as "scumming." This is caused by the particles of pigment separating from the varnish or in other words, going out of suspension. This can readily be ascertained by examining the plate under a microscope, which will show fine individual particles of pigment released from the varnish. However, all cases of scum on the plate are not due to this cause. The condition becomes more accentuated according to the amount of water carried to the plate.

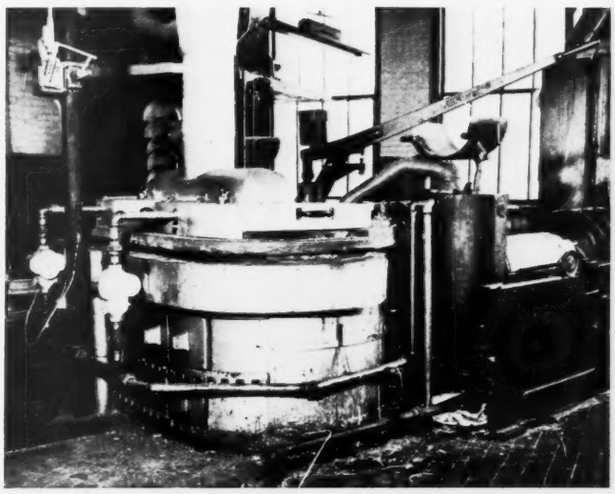
In summarizing the question of varnishes used in the manufacture of offset inks, as compared to those used in letterpress inks, we might state that in the case of the latter, a number of substitutes for linseed varnish are being used with apparent success. As stated previously, we might reiterate for the reasons mentioned heretofore, no substitute for linseed varnish has been found in the manufacture of offset inks.

COLOR VALUES IN OFFSET INKS

Color values in offset inks as compared to letterpress inks, with a few exceptions, are dependent largely on the paper used. Until quite recently, the use of enamel paper for offset printing had not been attended with any great degree of success. Fortunately a great many of the difficulties in this connection have been overcome. Considerable progress has been made, I might add, in the use of enamel paper on the offset press within the past year. As a consequence, offset printing in both black and colors, compares favorably with letterpress, both as to lustre and color value on this type of paper. I believe that you will agree with me, when I state that on the regular offset paper, offset printing is characterized by a softness difficult to attain by direct letterpress.

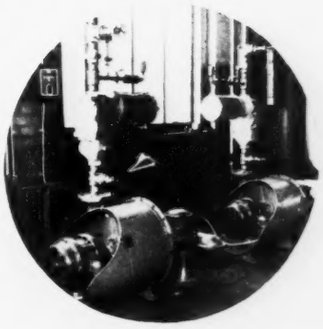
If offset inks of the proper tinctorial strength are used the price per pound compared to letterpress inks runs considerably higher. However, this is made up for by the greater coverage obtained with the use of the stronger inks and in most instances, the cost will be less in comparison to the letterpress ink, all things being equal. It is a known fact that it requires less offset ink to cover a given area than it does letterpress ink, consequently, a greater coverage is obtained from the offset ink. However, we must bear in mind, this is only true providing the ink is of the proper tinctorial strength. In summarizing the question of price and coverage I would say that as a general rule the cost of the ink on

in Akron . . .



The TIMES-PRESS goes to *GAS*

The amazing performance of Kemp Immersion Gas Burning is a result of the principle of *complete* premixing of air and gas which provides the self-supporting flame and utmost thermal efficiency. Two Kemp Industrial Carburetors supply the air-gas mixture for the Times-Press Stereo pot.



The KEMP Guarantee is a FLAT 40% SAVING

NOW the 8-ton Wood stereotype pot of the Akron Times-Press is heated by **gas** with the Kemp system of immersion gas burning.

Operating cost is 70 percent less than with electric heat. And Kemp immersion heating with gas retains the advantages of rapid delivery, minimum dross formation and improved working conditions, for which electric heat has long been famous.

Kemp is saving money for 44 newspapers. Kemp will save money for you, too. Investigate TODAY.

KEMP of BALTIMORE

THE C. M. KEMP MANUFACTURING COMPANY
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DULL SAWS increase costs!

Only when every tooth in a saw is filed to exactly the same size and spacing can it cut truer, faster and stay sharp longer. Those are the results you get with this accurate, precision machine, the

FOLEY AUTOMATIC SAW FILER

It files and joints every tooth to absolutely uniform size. Fully automatic. No eye-strain. No human errors. Makes saws last longer.

One Machine files all kinds of saws—hand saws, band saws, metal cutting circular saws and cross-cut circular saws 3" to 24".

30-Day Free Trial

Give it a real test on your own saws. Write us today for folder giving complete information and our attractive prices.

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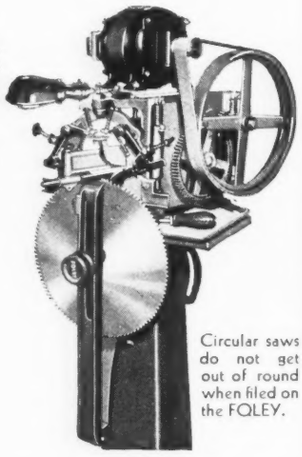
Minneapolis Journal
Philadelphia Public Ledger
Portland Oregonian
Providence Journal
St. Louis Star
Washington (D.C.) Star
And many other newspapers and commercial printers.



Circular saws do not get out of round when filed on the FOLEY.

Linotype Liners

TRADE ★ MARK

With this trade-mark now made of *Stainless Steel.* It is the *only* liner made for the trade in this material.

The steel is *harder.*

It is rustless.

It boasts its customary accuracy in measurement.

AT THE SAME LOW PRICE
As previously sold

Thousands of liners are carried in stock awaiting your demands.

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DISTRIBUTORS FOR

Ace cord-rubber *guaranteed* belts, matrix delivery, distributor, assembler, intermediate drive, etc.

LINOTYPE PARTS CORPORATION

NEW YORK
203 Lafayette Street

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314 West Randolph Street

LOS ANGELES
1520 Georgia Street

an offset job would be less than the job done by letterpress, all things, of course, being equal.

METALLIC INKS FOR OFFSET

We come now to the question of metallic inks for offset printing. In this connection, I have been present at a number of attempts to run metallic inks on the offset press. These trials were in practically every instance either unsuccessful or at the best only partially successful. You no doubt are familiar with the present method of obtaining a metallic effect in lithography. It is done by running the sheet direct into a bronzing machine. This method, where the bronzer is connected to the press, makes of it one operation. I believe you will agree with me that the results so obtained are, if not superior, at least equal to metallic printing done by letterpress.

WHY GOLD BRONZE INK FAILED IN OFFSET

The best results obtained by running metallic ink on the offset press were obtained from aluminum ink. The attempts made to run gold ink, at least those I witnessed, were all failures. The reason in my opinion, is that the bronze used in the metallic ink does not stay in suspension when it reaches the blanket. The aluminum bronze, being lighter in specific gravity, does somewhat better, but still left a great deal to be desired. The water also had a tendency to kill the lustre of the bronze, and in comparison was very unfavorable indeed. In comparing the cost of the aluminum ink on the job run on the offset press, it was so much greater in comparison to the work done by the bronzer as to make it prohibitive for runs of any size. I don't believe metallic printing on the offset press will meet with any degree of success until a new vehicle is discovered to replace the one in use at present. It is a physical impossibility to keep the metallic ink in suspension until it reaches the offset blanket. It was also found that the coverage of the metallic ink on the offset press was a great deal less than by direct printing, and there was no comparison as far as the looks of the job were concerned. It was all in favor of the letterpress job. In conclusion I believe that for the present the letterpress is the only one to employ for metallic printing.

Latest Printing Equipment Mechanisms

Recent Linotype Improvements

Detail refinements have been made in the construction of the Linotype recently. As announced by the Mergenthaler Linotype Company, these improvements are listed below:

Key Shift Magazine Mechanism.—On Models 25 and 26 the handles for manually shifting magazines have been replaced with power mechanism, and the shift from one magazine to another is made instantly by the light touch of a key. An annunciator indicates the magazine in operating position.

Em, En, and Thin Space Mechanism.—All new Linotypes are now equipped with means for releasing em, en, and thin spaces, individually or collectively, when the spaceband key is touched. This is useful where extra wide spacing, particularly in display faces, is required. The mechanism can be thrown in or out of control by moving one or all three of the control knobs located on the keyboard cam cover.

Spaceband.—A new member has been added to the spaceband family, known as the "Wide Range" band, with a minimum thickness of 0.032 in. and a maximum expansion of 0.117 in. This spaceband is capable of extremely close spacing with the advantages of medium or wide spacing.

Spaceband Identification.—Where an office has several different styles of spacebands it is sometimes difficult to keep them from becoming mixed in the sets. Identification marks in the form of horizontal lines have been ground in the front edge of the lower end of the wedge. One line indicate the regular thick band, two lines the extra thin, three lines the extra thick, and so on.

Em Scales.—All em scales on Linotype are now made of German silver instead of etched zinc.

Assembler Entrance Flexible Buffer.—To improve assembling conditions and eliminate year on matrix lugs, the upper assembler entrance glass has been replaced with a flexible material similar to Bakelite, known by the trade name, "Ohmoid." These buffers are available for application to all outstanding Linotype machines.

Assembling Elevator Matrix Lug Support Rail.—A support rail has been added to the Assembling Elevator Back Plate to prevent matrices jumping out of position when the assembling elevator is raised with too much force. When the assembling elevator ascends, the supporting rail comes in contact with a cam which forces it over the lower back lugs of the matrices holding them securely in place. The supporting rail recedes when the assembling elevator descends.

Recessed Molds.—All recessed molds, universal and display, have a small auxiliary rib ground on the face of the main rib to facilitate accurate trimming, and to improve ejection.

Electrical Pot Mechanical Thermostat.—A metal splash guard and a change in the form of the terminal block have been made to prevent the possibility of metal splashing on the terminals and causing a short circuit. The electrical contacts are completely shielded against metal splashes.

Vertical Mouthpiece Wiper. A safety attachment has been applied to prevent the wiper coming in contact with the mouthpiece when the machine is backed up.

Pot Pump Cam Relief.—Means have been provided so that the tension of the pot pump lever spring will not be transmitted through the Pot Pump Lever to the Cam Roll when it is idling on the Pot Pump Cam. The primary purpose is to eliminate wear on the Pot Pump Cam.

Second Elevator Bar Delivery Paul.—This pawl has been lengthened and the form changed to prevent the ears of large matrices slipping under the pawl when the line is transferred to the second elevator bar.

New "General Purpose" Typograph

With the placing of the Super-Force typograph in the higher-price brackets, Wm. A. Force & Company, Inc., 105 Worth St., New York, N. Y., has placed on the market the General Purpose typograph. This new typograph incorporates most of the time-proven features of the Super-Force and is built to the same dimensions. Quantity production and the deletion of some mechanically-unnecessary finishing has allowed this machine to be placed in competition in the low price field. In a lengthy series of tests, it is claimed, this latest Force machine proved a fitting companion for the Super-Force.

New

No. 22 Electric

PROOF PRESS

$685

40 or More Proofs Per Minute!

Write for full information

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Originators of the Modern Proof Press

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How Thick?

Did you want it .152" and get it .156"? *Approximately* 11 point won't do nowadays. There is too much expensive makeready involved. You want what you order—in thousandths.

You can get it. Shavers are equal to it. All you need is an inspection check.

With a Hacker Plate Gauge to check plates into your plant you will get the thickness you specified.

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America's
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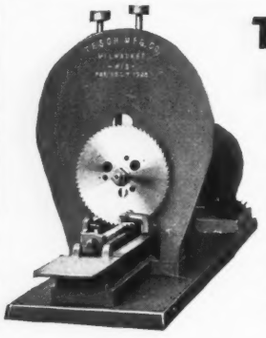
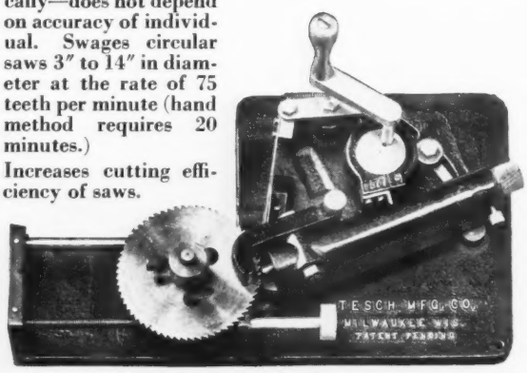


Tesch Automatic Filer—Swager

Fully automatic for saws 3″ to 10″ diameter having any number of teeth. Does not depend on tooth for resharpening—mechanically controlled. 100 per cent cutting efficiency.
Motor driven or hand power.

Swages teeth mechanically—does not depend on accuracy of individual. Swages circular saws 3″ to 14″ in diameter at the rate of 75 teeth per minute (hand method requires 20 minutes.)
Increases cutting efficiency of saws.



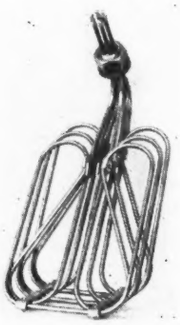
"Tesch Equipment Pays for Itself"

TESCH MANUFACTURING CO.
2850 South 20th Street ▲ Milwaukee, Wisconsin

Develops Three Small Heating Units

To retard chemical action on lead-sheathed units used for heating corrosive solutions, such as pickling and plating baths, the General Electric Company has developed a new heating unit which contains a sheath-wire winding about which is cast a heavy block of lead. The new unit has a low watt density of 13 watts per square inch of immersed surface, a factor which should greatly increase the life of the device.

The company has also announced a new copper-sheathed unit to meet the need for a heating device which can be carried about, placed in almost any vessel containing water, and



General Electric Immersion Unit, 12 kw., 220 v., Type Y2979 for linseed oil tank. All immersed parts including sheath of unit made of Monel Metal.

plugged into an ordinary power circuit to heat the water. It is formed in a self-supporting helix with long vertical extensions ending in a sealed-plug socket. Only the spiral is active; thus a vessel need not contain more than approximately five inches of water to permit use of the unit. This device has a rating of 1300 watts at 115 or 230 volts.

Another General Electric heating unit recently designed is made entirely of monel metal which does not stain linseed oil when heating the oil in the manufacture of ink, varnish, etc. Although electric heat is valuable for such applications because of the need for accurate temperature control, ordinary metal-sheathed units would discolor the oil. This unit has a rating of 12 kw. at 230 volts d.c., and one or three-phase a.c.

General Repairs of Linotype or Intertype Parts
Special Tools and Appliances for Composing Room
Reid Linotype and Intertype Magazine Racks
WILLIAM REID & CO.
537 SO. LA SALLE STREET CHICAGO, ILLINOIS

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Whether you print by Letter-Press or by Offset you can secure the best results from

MONOTYPE
SINGLE TYPES

Those qualities in Monotype machine-set and hand-set type which give such a clear and sharp impression on paper when printed by Letter-press methods are no less important in producing the proofs from which plates are made for printing on Offset presses. Brand new single type for every job, each of uniform height with a perfect printing surface, assures best results for either method.

We have never believed that machine composition would displace all hand composition, and consequently we have for years provided the printer with machines for making the type and material required for efficient hand composition, and saving the waste of distribution.

Likewise, while we have no illusions that Offset printing will supersede Letter-press printing, we do believe it has a most important place in the printing industry, and that Monotype with its long experience in meeting the requirements of the Letter-press printer is peculiarly qualified to also serve the Offset printer with plate-making equipment. In meeting the photo mechanical requirements of Offset printers we have kept in mind the necessity for equipment which will afford greater efficiency and lower cost of operation as well as improved quality of product, and yet be available to printers at reasonable prices.

COMING SOON—New, improved, lower priced Monotype-Huebner Precision Photo-Composing Machine, with new Vacuum Printing Frame—combined in one efficient unit. See demonstration at the Huebner Laboratories, 202 East 44th Street, New York City.

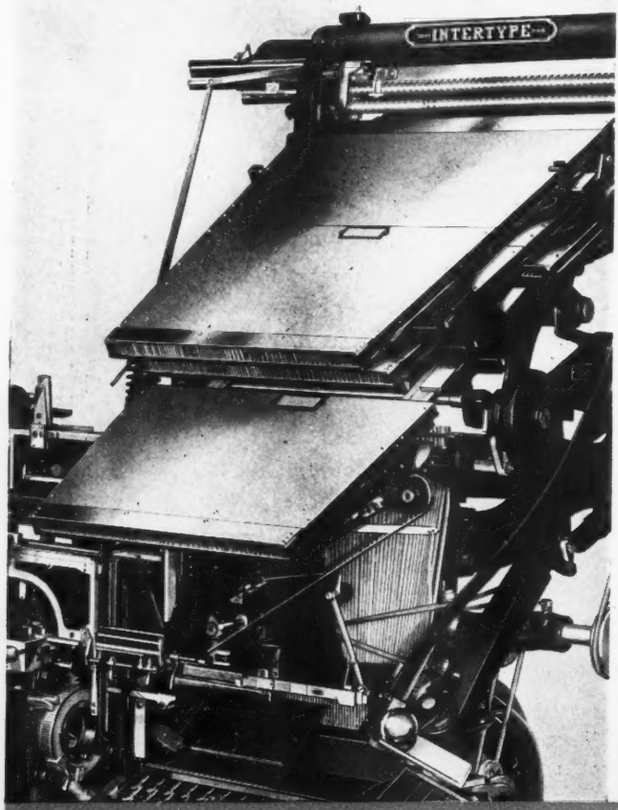
Lanston Monotype Machine Co.

Monotype Building, 24th and Locust Streets, Philadelphia, Pa.

Composed in the new Monotype (Goudy) Deepdene Bold, No. 317, here shown for the first time

ANOTHER
NEW
INTERTYPE

For Further Reducing the Cost of Headletter and Display Composition



Headletter and Display Faces as large as the above lines will Run Regular—full 72 characters—in any of the three main EXTRA WIDE Split Magazines—and—at Keyboard Speed

Any of the Split Magazines can be Removed and Replaced with a minimum of physical effort.

THE NEW MODEL H

REAL MONEY-SAVING FEATURES:

1. Sets headletter and display faces up to full-width 30 point, as well as many larger point size condensed faces, from any of THREE MAIN SPLIT MAGAZINES at keyboard speed.
2. Three complete fonts consisting of 72 characters each are available from the keyboard.
3. Any split magazine can be removed and replaced quickly and simply. The magazines are instantly brought forward to a convenient position for easy handling.
4. Changes from one magazine to another are made with the convenient, light-action, Intertype chain shift.
5. Intertype EXTRA WIDE 72-channel split magazines can be used in any or all of the three positions—top, bottom, or middle.
6. The Model H Intertype can be furnished with side magazine equipment, and also with the Intertype Universal Autospacer.

INTERTYPE

FOR FAST HEADLETTER AND DISPLAY COMPOSITION

• SEVEN OF THESE NEW MODEL H INTERTYPES HAVE ALREADY BEEN SOLD

INTERTYPE CORPORATION, Brooklyn, N. Y.

Chicago • New Orleans • San Francisco • Los Angeles • Boston

Set on the Intertype in Cairo